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TECHNICAL PAPER 44

A light blue silhouette map of the United States, including Alaska and Hawaii, serves as a background for the central text.

# **The Standard Statistical Establishment List Program**

**AGRICULTURAL SERVICES  
FORESTRY AND FISHING  
MINING  
CONSTRUCTION  
MANUFACTURING  
TRANSPORTATION  
PUBLIC UTILITIES  
WHOLESALE  
RETAIL  
FINANCE  
INSURANCE  
REAL ESTATE  
SERVICES**

U.S. Department of Commerce  
BUREAU OF THE CENSUS

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TECHNICAL PAPER 44

# **The Standard Statistical Establishment List Program**



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## Introduction

The seven working papers presented here document a Government-wide consensus on development of the Standard Statistical Establishment List (SSEL), a comprehensive computerized universe list of all business enterprises and their establishments in the United States.


There has been a long history of endorsement of the general principle that such a standardized centrally compiled list of firms and their establishments should be available for multi-agency use in the conduct of statistical surveys. Presently, each Government statistical agency is responsible for compiling and maintaining the business registers needed for their particular statistical programs. The use of independently developed lists, with attendant differences in definition and coverage, seriously affects the comparability of the economic data provided by the various agencies, and also results in considerable duplication of effort and increases in respondent reporting burden. Concerns such as these constitute a substantial part of the criticism of government statistical programs.

The development and use of a single directory of firms and establishments, industrially classified and maintained by a single agency, would: (a) greatly enhance the comparability of related data series; (b) promote efficiency in the collection and presentation of data and reduce the reporting burden on respondents; (c) provide a common frame for use in selecting

statistical samples of firms and establishments.

The Office of Federal Statistical Policy and Standards of the Department of Commerce (formerly Division of Statistical Policy of the Office of Management and Budget) has been a consistent advocate of this central list concept. Towards this end, in 1968, the Bureau of the Census was designated by OMB as the focal agency for the development, establishment and operation of such a directory on behalf of Federal statistical agencies. Funding for the project started in fiscal year 1972. In the summer of 1972, an OMB-led interagency task force was organized to promote the interchange of ideas between the Census Bureau and the major participating source and user agencies in solving the operational and legal problems inherent in creating a viable Federal universe list system.

The SSEL Working Papers are presented here independently, since they represent the gradual development of the SSEL over a period of years and were issued separately as the system evolved. Because of their separate development and issuance over time, the papers contain a certain amount of duplication, especially as regards the general nature of the SSEL. It should be noted that the Working Papers do not represent the final stage of development of the SSEL; rather, each is subject to possible technical changes as further refinements to the system occur.



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## WORKING PAPER 1

# Scope and Content of the SSEL

### INTRODUCTION

The development and implementation of a Standard Statistical Establishment List (SSEL—formerly Industrial Directory) has long been recognized as a necessary tool for the modernization of the U.S. statistical system. The Census Bureau as the designated focal agency has been authorized funds to undertake the work of developing the SSEL. The Interagency Committee Task Force on Confidentiality and an Industrial Directory was established by the former Statistical Policy Division, Office of Management and Budget (OMB), to insure that the needs of interested agencies are met and to determine optimum methods for obtaining the data inputs required from other participating agencies. Responsibility for statistical policy was recently transferred from the Office of Management and Budget to the U.S. Department of Commerce, Office of Federal Statistical Policy and Standards.

Working Paper 1 is a general statement covering the content and scope of the SSEL, the proposed method of implementation, the identification of problem areas requiring solution and a proposed time schedule for implementation. Further working papers in this series will cover detailed aspects of the SSEL including the following:

- Paper 2. **Organizational Structure of Firms**
- Paper 3. **Size Classification of Economic Characteristics**
- Paper 4. **Scope of Industrial Classification and Classification Problems**
- Paper 5. **Geographic Coding**
- Paper 6. **SSEL Maintenance and Update System**
- Paper 7. **Scope and Content of the City and County Business Patterns Program**

### INFORMATION TO BE INCLUDED IN THE SSEL

The SSEL will consist of a central multipurpose computerized name and address file of all known multiestablishment and single-establishment employer firms (and nonemployer agricultural firms) in the United States. The appendix to this paper provides in detail the proposed information to be included in

the SSEL for each organizational unit of the company. The systems design for computer processing is predicated on a variable word-length record which permits additional information to be added as desired. Changes to content of the file can, therefore, be made at any time.

The establishment has been accepted as the basic building block of the SSEL. Generally, the establishment is considered to be the smallest basic unit for which key figures of economic activity such as employment, payroll, and the value of products or services are available. Through the combined use of the employer identification (EI) number and the SSEL file number, it is possible to link together and identify the affiliation of parent companies, subsidiary firms, and their establishments throughout all phases of economic activity. Sample studies are contemplated to evaluate alternative control file links that can relate to the Social Security Administration Employer Reporting Plan (ERP) EI/Establishment objectives and the Bureau of Labor Statistics Unemployment Insurance (UI)/EI numbering systems. For many purposes, however, the establishment may not be the most useful unit for reporting (combinations of establishments or a portion of one establishment) and some identifying link between the actual reporting unit and the establishment or the company will be necessary.

Minimum information for each organizational unit of the company (three levels) will include—

- Company name, mailing address, and physical location
- Industry code
- Geographic code
- Legal form of organization
- Size codes for employment and other economic variables
- Employer identification number
- Directory file number

Existing government statistical programs and publications were studied in order to arrive at a meaningful set of proposed standard size codes for the economic variables to be included in the SSEL.

Initially, size codes will be derived from data collected on the annual Company Organization Survey for multiestablishment companies and from Internal Revenue Service (IRS) and Social Security Administration (SSA) records representing first-quarter employment, first-quarter payroll, and annual payroll. Proposed size-class codes are also being developed to cover establishment sales and receipts and inventories. Size codes

will be provided at the establishment, legal entity and enterprise levels and will be a standard set of size ranges covering each characteristic for all industries. The economic characteristic size-class codes will represent the level of total activity (primary and secondary operations) of the particular organizational unit. The SSEL will have the capability of providing a limited number of customized size codes to meet unique sampling needs where standard size codes are not satisfactory (the additional custom size codes must be specified and employed by the user in light of disclosure by subtraction). Actual reported data for the current and previous years will be retained by the SSEL system (with estimates for delinquent or late reporters) that can serve as the basis for determining such nonstandard codes. The cost of developing custom size codes would be minimal if done in conjunction with a scheduled update or correction operation.

However, for samples designed to collect product information (whether it is the major or minor activity), total activity codes may not provide a sufficient level of detail and a methodology will have to be developed to introduce size codes for secondary product or receipt values to be included at some appropriate level.

## **PROPOSED SOURCES FOR INFORMATION INPUTS**

Informational sources for most items will differ for multi-establishment and single-establishment firms.

### **Multiestablishment Firms**

Information for multiestablishment firms will come initially from Census Bureau records. The necessary basic information has been assembled for the organizational units of all firms included in the 1972 economic censuses. All establishments of these firms are linked to the enterprise level and are identified by their individual SIC codes, physical locations, employment size codes, etc. All known domestic establishments of these multiunit firms are identified, regardless of activity. This practice represents a departure from that of previous censuses where records were maintained only for establishments engaged in activities defined as within the scope of the economic censuses.

Multiestablishment companies not covered by the economic censuses were identified in a two-stage survey. In November 1972, as part of the economic census processing, all legal entities (see definition in working paper 2, p. 12) with 50 or more employees were canvassed to determine their enterprise structure. Each legal entity was requested to list all companies it owned or controlled and the name and EI number of its controlling company, if any. Information was also requested on employment, kind of industrial activity, and number of business locations operated under that EI number. Detailed listings of establishments were not requested in this survey since the major emphasis was to consolidate those legal entities into their correct enterprise structure. (This operation was

coordinated with the regular economic census processing to produce an integrated file). A similar survey was conducted in January 1974, covering calendar year 1973, to canvass smaller entities with 20 to 49 employees. In addition, 175,000 small out-of-scope companies (less than 20 employees) were canvassed in 1974 if classified in an activity changed by the 1972 SIC revision.

Beginning in 1974 and continuing in subsequent years, an annual company organization survey was undertaken to insure that the organizational structure of each company would be updated at least once each year. This survey includes companies in scope of the economic censuses as well as out-of-scope companies covered in the special survey described above. Pre-printed forms sent to each company list all establishments operated by it, and include name and physical location of each establishment. The company is requested to update these listings. In preparation for the 1972 economic censuses, only first-quarter employment was requested in the prec canvass. For the 1973 Company Organization Survey, first-quarter payroll and annual payroll items were added.

### **Single-Establishment Firms**

Information for single-unit firms is derived from administrative records of other government agencies since it would be difficult to justify the government and respondent cost involved in duplicating this information by direct survey contact. Over the past several years interagency discussions have centered on the most effective methods for using the records of the Internal Revenue Service (IRS) and the Social Security Administration (SSA) as the basic input sources for information on single-unit companies.

The Business Master File (BMF) of IRS serves as the basic universe file from which the single-unit company listing is derived. This source provides company name, address, EI number and legal form of organization for all firms with one or more paid employees. The IRS industry code is used if an industry code is not available from other sources.

A problem may arise with respect to obtaining the address of the physical location for some single-unit companies. Experience in using the BMF for the economic censuses has shown that the addresses listed for approximately 15 percent of the companies on the BMF are mailing addresses rather than physical locations.

Receipts and payroll data, when introduced into the SSEL files, will also be obtained from the tax return records of IRS for single-unit companies.

First-quarter single-unit employment and the Standard Industrial Classification Code will be obtained from the records of the Social Security Administration. The four quarters of payroll will be obtained from the records of IRS. Because of annual maintenance cost, the initial establishment list will only cover companies having one or more employees, with the exception that agricultural zero-employee firms will be included. The farm portion of the SSEL will be considered an integral part of the system; however, annual maintenance



of agricultural zero-employee firms will not be included since present requests for funds do not include updating these firms.

The farm portion of the SSEL is unique in that approximately 80 percent of all agricultural firms are nonemployers and yet constitute a major portion of the firms from which information for current surveys as well as the census of agriculture must be obtained. The agricultural sector requirements for a useful list sampling frame are that it contains zero employers and an annual update. The Statistical Reporting Service (SRS) of the U.S. Department of Agriculture (USDA) and the agriculture census are largely concerned with commodity statistics. An efficient list frame at the disposal of SRS is necessary if they are to fulfill their responsibilities of providing current statistics in an efficient manner.

Based on general agricultural definitions, a list of agricultural businesses (with and without employees) will be assembled and referred to as the Farm List. These assembly and maintenance efforts will be a joint endeavor of the SSEL operation and ongoing USDA programs.

The Farm List will be assembled by the SSEL from existing census records plus administrative records of the participating agencies in preparation for the quinquennial census of agriculture. Between the 5-year agriculture censuses, the annual corrections will be accumulated as a result of name and address, classification, and ownership changes reported under participating agency programs (primarily from ongoing USDA surveys). Based on individual agriculture program needs, these corrections can be incorporated into the consolidated SSEL system at any time. Equal user access to corrections will reduce the need for participating statistical programs to independently update separate name and address lists.

Those agriculture companies that have multiple farm or nonfarm establishments in their multiunit operation will have their complete company structure included in the SSEL file. The USDA is currently researching the possibility of developing legislation that will provide the necessary confidentiality to allow for exchange of information.

At present, data about zero-employee firms can be obtained economically only from income tax return records. Future plans include obtaining information for zero-employee firms as a byproduct of an expanded annual program covering receipts data.

### **Combined Directory File**

Using these inputs, the construction of the SSEL is known to be technically feasible since the methodology had been followed in assembling the economic censuses mailing list and utilizing administrative data. The linkage among the principal source agencies, i.e., the Census Bureau, IRS, and SSA, is the common usage of the EI number by all three agencies. As the BLS 202 program incorporates the EI number into its reporting system the potential for improved linkage increases.

In constructing the multiestablishment company file, the Census Bureau records the EI number of the entity owning the establishment in conjunction with the SSEL file number,

matching these EI numbers of multiunit firms against the BMF file and unduplicating results in a residual list of single-establishment firms. Employment, payroll and other information can be readily included from the SSA and IRS files because of the commonality of the EI number.

The inclusion of data in the SSEL from basic administrative records must conform to the practices and policies of the governmental agencies involved as the input sources. Therefore, each agency must determine if information can be supplied to the SSEL and, in turn, made available to other qualified SSEL users under their present legislative or administrative authority. If not, changes in such authority must be sought.

### **SOME PROBLEMS ASSOCIATED WITH INITIATING AND MAINTAINING THE ESTABLISHMENT LIST FILES**

Problems (both conceptual and technical) related to the initiation and maintenance of a multiagency list differ from multi-establishment and single-unit companies. One of the major concerns is that although data items may be available for implementation of the plan, the quality of each informational item is not uniform. Moreover, the most feasible method of updating and maintaining the components of the file may differ depending upon the item immediately involved. The problem areas noted here are, for the most part, presented without recommendation of a specific solution. Time will be required to evaluate alternative methods and to determine optimum procedures that would represent the most reasonable compromises between need and practicality.

### **Updating the Files**

It does not appear possible to update all companies and all data items on the SSEL file with the same frequency. At a minimum, the SSEL will be updated annually. However, not all items listed for each establishment will be updated annually (for example, SIC codes for most establishments or companies will probably not be revised annually). Current surveys conducted by the Census Bureau and other agencies such as BLS will constitute a significant source of information for interim updating of the files. Current surveys that collect data for selected segments of an establishment's activities and not the total establishment operation would not be used to change an SIC code.

An important consideration bearing on the frequency of updating is the extent to which it will be possible to maintain a continuous "ownership" history of establishments by linking predecessors and successors (to facilitate a time series capability for analysis or publication). Although not considered feasible to do in all cases, the Census Bureau proposes to link all establishments with 50 or more employees.

The frequency of additional information on business births and similar changes (such as address or SIC revisions) to the SSEL files is another important matter to be resolved. Should

these corrections be made as they occur? on an annual basis? or more frequently? On the other hand, how should "deaths" be handled? Presently, there is a lag of about 3 to 9 months from the initial assignment of the EI number by IRS to the assignment of its industry code by SSA and its ultimate inclusion in the SSA and IRS data records. The potential changes to the SSEL will occur on a daily, monthly, and quarterly basis. The system will have the capability to incorporate these changes into the complete file on a monthly or quarterly basis. Preliminary indications, based on costs and user needs, suggest that the SSEL edit and process significant changes as they occur, but physically change the SSEL file on a quarterly basis. The specified needs of individual users will determine what information will be distributed to users on a flow basis and, if the cost of an overall file update is justified, on a more frequent basis than quarterly.

## Industry Classifications

Probably one of the most complex problems associated with the SSEL is the assignment and maintenance of accurate industry codes for all organizational units. Industry codes are needed at the various levels of company organization, from the basic establishment up through the enterprise level. In the last instance, the problem of defining and classifying conglomerates, for example, has never been solved satisfactorily.

One of the most important objectives of a centralized establishment list is the use of standard industry codes throughout the Federal statistical community. A major problem has been the lack of comparability of statistical series purporting to cover the same universe, but collected and compiled by different Federal statistical agencies. Differences among such series are attributed in part to the assignment of different SIC codes to essentially the same establishment and to differences in the definition of reporting units.

There is, at present, no consistent basis for the uniform assignment of industry codes by all agencies. This is due, in part, to different information being reported or different interpretations. Nor, except for establishments included in the quinquennial economic censuses, is there a uniform data-collection basis for updating existing codes. However, even in the economic censuses, small establishments are no longer mailed report forms, and industry codes for these establishments are obtained from the administrative records of SSA and IRS. Industry codes, based on a modified version of the SIC reflecting principal industry activity, are assigned by the respondent on most business tax returns to IRS. SSA assigns an industry code when a firm applies for an EI number. Agencies such as BLS and Bureau of Mines independently assign industry codes to the reporting units included in their surveys.

The initial establishment list files will include industry classifications that have been assigned at various times and from different sources. Tentative initial sources for these codes for employers are—

Reporting unit	Sources of industry code
Manufacturing plants with 250 or more employees and selected smaller plants.	Latest Annual Survey of Manufactures
Other manufacturing plants and all other establishments in scope of the economic censuses—mail cases and administrative record cases	Latest economic census or latest Company Organization Survey
Establishments not in scope of the economic censuses owned by—	
a. Firms in the scope of the economic censuses	Latest Company Organization Survey
b. Firms totally out of scope of economic censuses	Census Out-of-Scope Survey (1972), latest Company Organization Survey, SSA, IRS-PIA, or BLS
Agriculture farms and establishments	Latest agriculture census

SSA stopped maintaining its rotational refiling program a number of years ago so, in many cases, the codes for small single-unit companies not contacted directly by the Census Bureau may be seriously out of date. Another alternative SIC source to be considered is the new BLS-coordinated programs with the individual States to contact all business firms for updated industrial classifications based on the 1972 revised SIC. A joint agency study is necessary to discuss classification criteria and schedule of availability for possible inclusion in the establishment list and to avoid duplicate agency efforts.

The criteria for updating the industry codes have not yet been established. It seems clear, however, that initially, industry codes for establishments in the Annual Survey of Manufactures would be updated annually from this source. There are various alternatives for maintaining a systematic updating of codes for the other areas. It may be necessary, for example, in connection with those areas in which movements are highly volatile or changes in products or services occur frequently, to use a different cycle for updating than for the more stable industries. Major attention must be given by the Census Bureau to the problem of frequency of updating industry codes as part of its responsibility for the operation and completion of the annual file update. A program will be developed for updating on a systematic, periodic basis that will include geographic coding of the physical location and changes in company affiliation.

## The Reporting Unit

The establishment has been accepted as the basic building block of the SSEL system. Generally the establishment is considered to be the smallest basic unit for which key figures such as employment, payroll, and value of products or services are



available. Through the aggregation of establishments, it is possible to build up to broader organizational levels, such as company-defined divisions, legal entities, tax units, and enterprises.

Although the establishment may be the ideal reporting unit as far as basic information presented on an industrial or geographic basis is concerned, it is not necessarily the most useful or practical for all reporting purposes. Many agencies, particularly those concerned with financial data, find the establishment concept inappropriate for reporting purposes. Even where the establishment unit is appropriate for reporting purposes, many companies prefer to combine their establishments into unique reporting units for monthly surveys, depending upon the survey involved. In such instances, an additional SSEL record represented by the reporting unit may be an acceptable compromise, and would be identified by a secondary name representing the kind of activity and possibly a geographic area (e.g., Cook County retail outlets).

Every data collection activity operates under certain constraints imposed by the recordkeeping practices of respondents, frequency of the collection of data, benchmark sources, coverage of program, etc. Ideally, a reporting system should identify and include all the major reporting units of a company from the establishment through the enterprise, and require that the reporting units for surveys collecting comparable types of data be identical. These objectives, however, are rarely ever achieved, even among surveys conducted by the same agency.

Therefore, it is important to develop, as part of the SSEL, a system by which it will be possible to link the reporting units in different surveys on a comparable basis, whether conducted by one agency or by several agencies. It is also clear that unless user agencies are willing to adopt a common numerical identification system, coordination or linkage between the SSEL system and the individual agency's system will be expensive and difficult to control.

### AGENCY ACCESS TO THE SSEL

A major question to be resolved is whether the SSEL should be limited to statistical purposes including the provision and maintenance of a mailing list as a common frame for use in selecting surveys or should be expanded to cover other uses that could not be considered detrimental to the companies involved. There appears to be unanimous agreement that the SSEL information for individual firms cannot be used for purposes of regulation, investigation or enforcement. This does not preclude the use of published totals (that do not disclose the operations of an individual company) for regulatory or enforcement analysis.

The Census Bureau proposes for legislative change that access to the SSEL be limited to statistical purposes only. The SSEL has been highlighted as a statistical tool whose basic purposes are (a) to achieve comparability in statistics collected by different agencies by providing a single source for the determination and assignment of the industrial classification of reporting units, based on the Standard Industrial

Classification; (b) to provide and maintain a mailing list for use in conducting current surveys; and (c) to provide a common frame for use in selecting statistical samples. To expand the use of the establishment list for other purposes at this time might well impair the chances of obtaining the necessary legislative changes which are now needed.

The Census Bureau also believes that access to the establishment list by other than Federal agencies should be limited to those State government statistical organizations engaged in a cooperative relationship with Federal statistical organizations. Under these conditions, constraints can be imposed upon the legal uses of the SSEL information. If State government units were to have unlimited access to the SSEL it would be difficult, if not impossible, to monitor their uses of SSEL information.

With these limitations in mind, the following amendment to Title 13 (which currently restricts the use of the SSEL) has been proposed:

### PROPOSED STANDARD STATISTICAL ESTABLISHMENT LIST LEGISLATION

#### A BILL

To amend Title 13, United States Code, to provide for a Standard Statistical Establishment List of Industries for Use by Statistical Agencies of the Government. The declared policy of the Congress of minimizing the cost of data gathering to the Government and of eliminating duplication of effort in obtaining information from respondents, makes it necessary to implement a general purpose name and address list of business firms for joint statistical use by qualified Federal agencies under approved confidentiality laws and regulations.

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,*

That a new section 10 to be added to Title 13, United States Code, to read as follows:

“10. Statistical Establishment List

“(a) The Secretary shall establish and maintain a Standard Statistical Establishment List (hereafter referred to as a List) file which will include information on all types of economic units within the scope of the Standard Industrial Classification and Enterprise Standard Industrial Classification and may contain the following types of information for each enterprise (corporation, partnership, sole proprietor, co-op, nonprofit, government entity, etc.) and its constituent establishments: name, physical location, establishment and tax identification numbers; parent company affiliation; standard industrial classification and other product and activity codes; legal form of organization codes; and employment and business receipts size codes; and other economic characteristics codes.

“(b) The List shall be compiled and maintained by the Secretary of Commerce through the Bureau of the Census from information collected by that Bureau and by other Federal or State agencies.

“(c) (1) List information shall be made available for statistical purposes only to Federal statistical agencies and designated statistical units within the Department of Commerce and other Federal agencies, and to their State cooperative agency counterparts with which they have arrangements to provide statistical services. The Secretary shall make such rules and regulations as he deems necessary and appropriate to insure maximum usage while limiting access to only those agencies or units that can insure List information as is made available is accorded confidential treatment and is used for statistical purposes only. List information will be made available to State agencies only if the Secretary is assured by the senior legal advisor to the States’ Governor that under the States’ law List information may be accorded confidential treatment and may be used for statistical purposes only.

“(2) Further, agencies’ use for nonstatistical purposes of individual data derived from other sources will not be construed as incompatible with agencies’ access to List information for statistical purposes.

“(d) (1) Any officer or employee of any agency having by virtue of his employment or official position possession of, or access to, the List file or portions thereof, who willfully discloses information contained therein except as specified in this title in any manner to any person or agency known by him not to be entitled to receive it, shall be guilty of a misdemeanor and fined not more than \$5,000.

“(2) Any person who, knowing himself not to be entitled to receive it, willfully requests or obtains access to or information from the List file or portions thereof from any agency under false pretenses shall be guilty of a misdemeanor and fined not more than \$5,000.

“(e) The Secretary will provide all items of the List information that are required by an agency to carry out its statistical responsibilities.

“(f) Copies of the List files and information therein or derived therefrom, in the possession of statistical agencies or units shall be immune from legal process and subpoena and shall not be publicly disclosed under 5 U.S.C. 552 in a manner which would identify individual companies or establishments. Except as specified in section (h) below, individual company information gathered in surveys or other statistical undertakings based on this List file shall be confidential and may not be used for purposes of taxation, regulation, investigation, or enforcement.

“(g) Statistical agencies or units eligible for access to the List will be monitored by the Office of Federal Statistical Policy and Standards to minimize the development or maintenance of separate files or lists.

“(h) Information specified in subsection (a) of this section pertaining to reports filed under this title shall

be an exception to the prohibition of section 9 of this title.

## USER CHARGES AND SERVICING OF REQUESTS

The detailed system for servicing requests for Federal statistical organizations, including user charges, is still in the planning stages. User charges will be on a cost-reimbursable basis. Preliminary plans conceive of several different systems in concurrent operation, depending primarily on the needs and size of the user agency. Typical examples would include—

1. Transmitting an updated master tape at periodic intervals to user agencies making extensive and continuous use of the files or portions thereof
2. Supplying information as requested for selected industries or establishments with designated characteristics
3. Acting as a service agency in selecting sample panels, based on the user agency specifications
4. Acting as a collecting and compiling agency in the conduct of surveys on behalf of a user agency

## CITY AND COUNTY BUSINESS PATTERNS (CCBP) PROGRAM

An integral by-product of the SSEL system will be a publication program presenting the statistical information compiled as part of the SSEL operation. This publication will substitute for the County Business Patterns program presently based on the SSA reporting unit concept and issued as a joint project of the Social Security Administration and the Census Bureau.

It is planned that the new publication will be based on the establishment and will begin by covering the 1974 data year. Statistical aggregates of establishment data will be provided for March 12 pay-period employment, first-quarter payroll, and annual payroll. Benchmark information will be made available for statistical aggregates by geographic area, i.e., State and county by industry, by appropriate size-class intervals. Current plans call for publication of all SIC data at the 4-digit industry level as soon as feasible. Present SSA coding of new EI numbers is assigned at the 3-digit level for selected areas, which precludes publication of 4-digit data until 4-digit birth coding is determined as necessary. The three data items for establishments of multiunit companies will come from the annual Company Organization Survey. Corresponding data for single-establishment companies will be derived from the four-quarters data from IRS/SSA files. If SSA’s data needs can be met by linking and/or directly using the annual multiunit establishment list information, the voluntary SSA ERP form can be eliminated as soon as it is feasible.

Specific publication plans are still being formulated and are subject to the availability of expanded CBP funds. As with County Business Patterns, public-use tapes will be available for purchase, and will include information for small cells not in the printed publications. The degree of information shown will be dependent upon the Bureau's disclosure provisions. Where cells have to be suppressed because of confidentiality, size ranges will be substituted.

Zero-employee firms are recognized as an integral part of the business universe, more in terms of number of business locations than in volume of dollar receipts. They are not considered a formal component of the SSEL file system for regular maintenance purposes. Zero cases are routinely processed for tabulation and inclusion in the economic census, but present authorization and requests for SSEL funds do not include the processing or updating of zero-employee firms. User agencies of the establishment list will have the capability of selecting segments of these unedited records for their statistical projects.

## PHASES OF IMPLEMENTATION

The SSEL became operational in early 1975. Shown below are five basis task areas, with much of the work scheduled to proceed concurrently.

Task Area	Time schedule
1. Construction of Establishment List files	
a. Multiunit sector	Jan. '73-Sep. '74
b. Single-unit sector	Late 1974
c. Assembly of complete file	Implemented
2. Design and development of computer system	Ongoing
3. Special research studies and resolution of technical problems needed to initiate SSEL	Ongoing
4. Meetings with user agencies and public groups	Ongoing
5. Amendment of present legislation	Ongoing



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## APPENDIX

### Standard Statistical Establishment List, Control File—Master, Potential Master, and Auxiliary File Items

#### 1. Company (M.U.)

Parent I.D. number (6-digit)

Parent name

Mailing address (number, street, place, county, State, and ZIP code)

Enterprise SIC code (current and historic) and year of update

Legal form of organization (corporation, proprietorship, partnership, Federal Government, State and local government, cooperative or mutual association (corporate or noncorporate) and other)

Economic characteristics size codes

#### Potential Master File Items

Source of company add to master file (program or agency)

Year of enterprise SIC

#### 2. Multiunit EI Level

SSEL company I.D. number (6-digit)

EI number

Additional agency I.D. numbers (unemployment insurance account number plus one other)

Name (including subsidiary designation)

Mailing address (number, street, place, county, State, and ZIP code)

Enterprise SIC code

Economic characteristics size codes

Date and source of EI addition

#### 3. Establishment

I.D. number (Multiunit establishment—6-digit company number plus 4-digit plant number. Single location company—9-digit EI number preceded by zero.)

EI number

Additional agency I.D. numbers (unemployment insurance account number plus one other)

Name

Mailing address for single-unit company (number, street, county, place, State, and ZIP code)

Physical location code (State, county, SMSA, place, and NRAC code)

Previous ID and source of the change (coverage and time series for over 50 employee establishments)

Date of action (month/year) for birth, death, reorganization, etc., control

SIC codes—current and historic (includes type of operation such as CAO's, warehouse, etc.)

—also includes a year code (numeric) indicating year of SIC update

Secondary activities (4-digit SIC level) over \$100,000 with broad size codes

Legal form of organization code

Alphabetic link code to identify relationship with a reporting unit (combined reporter, company-designated division or subsidiary)

Establishment reporting plan number (SSA control code)

#### Potential Master File Items for Establishments

Physical location description (number, street, city, etc.)

Industry specialization ratio

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Temporary "T" for SIC codes self-classified (not derived from reported data)  
Store number  
BLS UI number

4. **Reporting Unit** — (A company-designated name and address record representing a unique combination of individual establishments representing division reporting, combined reporting agreements, or a part of one physical location).

Parent I.D. number (6-digit)

Name (parent plus reporting unit name)

Mailing address (number, street, place, county, State, and ZIP code)

Reporting unit code (alphabetic) to link each establishment of the reporting unit (reporting unit is defined by each company for mailing and reference purposes).





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## WORKING PAPER 2

# Organizational Structure of Firms

## INTRODUCTION

This paper consists of a general examination of the various organizational components of companies to be included in the Standard Statistical Establishment List (SSEL). The SSEL, when operational will be a mailing list source for qualified Federal Government statistical units.

Some of the concepts presented in Working Paper 1 are further developed in this document.

Minimum information for each organizational unit of the company will include company name, mailing address and physical location; industry code; geographic code; legal form of organization; size codes for employment and other economic variables; employer identification (EI) number; and SSEL file number.

This information will be maintained for each organizational unit of the company (enterprise, legal entity, establishment, and reporting unit). Additions and corrections to the file will be based on standard edit and correction criteria, to be determined by the participating members of the SSEL system.

User agency programs would, therefore, update the organizational structure of the SSEL whenever possible, so the latest information on a particular respondent is available to all participating agencies. This interagency exchange of company organizational structure information for strictly statistical purposes will provide a current stable foundation for all Federal statistics.

The use of one central universe list will greatly diminish the lack of comparability and consistency between data series of Federal Government agencies. Because the SSEL will be organized on an establishment basis (generally considered to be the smallest basic unit for which key figures of economic activity are available), it will be possible for SSEL member agencies to know the exact components of a particular universe and of any data series derived therefrom. Through the combined use of the employer identification (EI) number and an SSEL file number, it will be possible to link together and identify the affiliation of parent companies, subsidiary firms and their establishments throughout all phases of economic activity. Currently, some agencies use a reporting unit definition for employer reports, and the precise nature of what comprises a particular reporting unit is not always identifiable without additional respondent reporting such as supplementary forms delineating the individual establishments in their particular reporting units. The use of the establishment as the basic

component of the universe list will allow the compilation of more exact sample lists and more efficient information gathering and projecting.

For example, a sample of any organizational characteristic such as enterprise, EI number, or establishment can be readily selected from the SSEL.

In addition to identifying the above-mentioned organizational levels, the SSEL will provide an additional name and address record that can be used for those statistical programs that are predicated on the reporting unit or similar concept. More specifically, the SSEL will have the capability of aggregating a number of establishments (by SIC and/or geographic location) to provide a reporting unit grouping that will meet the objectives of the specific program.

Firms active in all areas of economic activity are covered by the SSEL, except private households, SIC 881.

Those households that are affiliated with other business establishments covered by the SSEL will have their complete company structure included in the system.

The complete Farm List is considered a coordinate part of the SSEL. The original agreement with the Department of Agriculture provided that the census of agriculture would become the basis for the Farm List, and funds for updating in noncensus years would probably be supplied by that Department. (For the complete statement on the Farm List, see Working Paper 1, p. 3.)

At this juncture, it may be well to define the principal components of the SSEL. In the past, company, firm, enterprise, and parent have all been used somewhat interchangeably. For the sake of clarity, the enterprise will be defined as the complete economic unit of the SSEL. Other components of the enterprise include establishments (lowest economic unit), legal entities or EI numbers, divisions and subsidiaries.

## SSEL DEFINITIONS

### Establishment

An establishment is defined as a single physical location within the United States and its territories where business is conducted or where services or industrial operations are performed (e.g., a factory, mill, store, hotel, movie theater, mine, farm, ranch, bank, airline terminal, sales office, warehouse, or central administrative office). Where distinctly separate activities are per-

formed at a single physical location (such as contract construction activities operated from the same physical location as a lumber yard), each activity would be treated as a separate establishment.

Distinct and separate economic activities at a single location are defined more specifically for treatment as separate establishments providing—

1. The individual activities are not customarily associated with one another at a single physical location.
2. No one industry description in the SIC includes such combined activities.
3. Employment in each separate economic activity is significant as defined in the latest **Standard Industrial Classification Manual**.<sup>1</sup>
4. Separate records are maintained or reasonable estimates are possible to report number of employees, payroll, inventories, and receipts.

Further qualifications and special rules for establishments are covered in appendix A (p. 16).

### Legal Entity or EI Number

The legal entity is an organizational unit of the enterprise which, for tax reporting purposes, is assigned an EI number by IRS. The legal entity or EI number may comprise one establishment (physical location) or many establishments. For SSEL purposes, single-establishment EI numbers which are not affiliated or owned or controlled by another enterprise are referred to as single-unit enterprises or companies. Multi-establishment EI numbers or affiliated single-establishment EI numbers are referred to as multiunit enterprises or companies.

### Subsidiary

A legal entity which is owned or controlled by another enterprise is called a subsidiary. Subsidiaries include legal entities in which the enterprise or parent company owns more than 50 percent of the stock as well as affiliated legal entities of the subsidiary in which the parent company has the power to direct or cause the direction of the management and policies. Each subsidiary possesses a separate EI number.

### Division

An operating unit or group of units of an enterprise or subsidiary is known as a division. A division may or may not be a legal entity in contrast to a subsidiary. The designation of

division to an enterprise represents a convenient reference label for each enterprise to define a unit in terms of a group of individual establishments. Divisions, as operating units set up by enterprise management, will not be a regular component of the SSEL. When specific surveys deal with divisions, these divisions could become special reporting units which are defined below.

### Enterprise or Parent Company

The enterprise is the entire economic unit consisting of one or more establishments under common ownership or control. It may vary in composition from a single legal entity (e.g., corporation, partnership, individual proprietorship) with only one establishment to the most aggregative level of business organization, as a complex family of legal entities (and their constituent establishments) under common ownership or control. If an enterprise is owned or controlled by another enterprise, all establishments of the subsidiary company are included as part of the second enterprise. For SSEL purposes, an enterprise which consists of one establishment only will be referred to as a single-unit enterprise or company. Enterprises which consist of more than one establishment will be referred to as multiunit enterprises or companies.

The SSEL definition of an enterprise is a more inclusive representation of organizational structure than the Internal Revenue Service (IRS) definition of a business. For SSEL purposes, the enterprise consists of all business organizations under its ownership or control (defined as owning more than 50 percent of the outstanding voting stock), as well as affiliated firms in which the enterprise has the power to direct or cause the direction of the management and policies. In some businesses the percentage of outstanding voting stock owned may be less than 50 percent and considered a controlling interest. As an example, the banking area considers 25-percent stock ownership as the controlling interest. Although some problems do arise on the question of ownership or control, generally the structure of all major multiunit companies is clear and the same under either concept. For small enterprises, by accepting the respondents' listings and judgements of which companies they control, the processing is simplified and possibility of disclosure is reduced.

The IRS defines "business" as that active business firm that files a Federal income tax return. The major definitional difference occurs for affiliated corporations, i.e., where one firm owns or controls another firm. In filing with IRS, parent companies have the option of filing a consolidated return for a group of affiliated corporations in lieu of separate returns when the parent corporation's stock ownership meets certain requirements.

Any company that is equally owned by two or more companies will be set up in the SSEL as a separate enterprise.

### Central Administrative Offices and Auxiliary Units

A central administrative office is an establishment primarily

<sup>1</sup> Executive Office of the President, Office of Management and Budget, **Standard Industrial Classification Manual, 1972**



engaged in management and general administrative functions performed centrally for other establishments of the same enterprise. An auxiliary unit is an establishment primarily engaged in performing supporting services for other establishments of the same company (enterprise) rather than for the general public or for other business firms. Central administrative offices and auxiliaries are treated and classified as separate establishments in the SSEL.

## MULTIUNIT LINKAGE

As discussed in Working Paper 1, the establishment has been accepted as the basic building block of the SSEL. Generally, the establishment is considered to be the smallest basic unit for which key figures of economic activity such as employment, payroll, and value of products or services are available. Through the combined use of the EI numbers and the SSEL file number, it is possible to link together and identify the affiliation of parent companies, subsidiary firms, and their establishments throughout all phases of economic activity.

There are at least four objectives of linking together all legal entities and their establishments that are affiliated through ownership or control:

1. To collect and publish data for enterprises per se, in addition to the summing of their establishments.
2. To insure no disclosure of data for individual companies by linking all related companies under a master number. Without the control aspect, the likelihood of disclosure and cost of review would increase.
3. To facilitate the centralized mailing, collection, and correspondence relating to report forms for an enterprise.
4. To establish a base for merger, acquisition, and concentration studies.

The second objective, to withhold from publication any data that might disclose the operations of an individual company, requires that the users of the SSEL know the complete organizational structure of the parent company. Operationally, individual establishment data are accumulated to the parent company level and considered as one unit, which is then evaluated for potential release under SSEL publication criteria. The SSEL will primarily rely on the individual companies to identify their complete company structure.

The third objective will enable the operators of each statistical program to mail survey forms to the specific location they desire—plant, subsidiary, or enterprise—depending on the level for which the data are being sought. For company-level programs, this organizational structure system also allows the enterprise to be informed on what information is being requested and to control and coordinate any correspondence.

Three types of records exist for each multiunit company: (1) A record for the enterprise, (2) a record for each legal

entity or subsidiary company represented by an EI number, and (3) a record for each active establishment operated by the company.

## SPECIAL REPORTING UNITS

Special reporting units represent a combination of individual establishments. There are numerous reasons for special reporting units, such as surveys of activities or functions rather than legal entities or establishments and surveys published on broad geographic bases. The occurrence of special reporting arrangements is frequent since simplified reporting and respondent cooperation is an important element in any mail survey. Most agencies make arrangements to allow grouping of establishment operations to an aggregate level which does not place an undue reporting burden on their respondents.

The SSEL has the capability to retain separate name and address records for programs that use special reporting units and to identify which establishments are included in the reporting unit. A prerequisite of the system would be that reporting units must be defined in terms of establishment units.

## SSEL IDENTIFICATION (ID) NUMBER SYSTEM

There are three types of numbers used to identify establishments in the SSEL: The enterprise number assigned by the SSEL to multiunit company organizations and establishments; the EI number assigned by Internal Revenue Service to legal entities for Federal tax reporting purposes; and the Social Security number, which is used by self-employed individuals (with no paid employees) for Federal income tax reporting purposes.

The enterprise number is composed of 11 digits, the first six of which uniquely identify the particular multiunit enterprise and are common to all the establishments that comprise it. Four additional digits, called the plant number, uniquely identify each separate establishment. A check digit completes the ID number.

The EI number is used by the SSEL to identify single-establishment companies that have paid employees. The EI number is also used to identify zero-employee establishments that are assigned an EI by IRS. (All corporations and partnerships, for example, are assigned an EI number whether they actually hire employees or not. The portion of the zero employee universe identified in this way is relatively small.)

The Social Security number is used to identify all other zero-employee establishments, i.e., sole proprietorships (in contrast to corporations and partnerships, sole proprietors apply for and are assigned an EI number only if they actually plan to hire employees). Thus, each company and each establishment within the SSEL has a unique number assigned to it. Appendix B (p. 17) illustrates the record linkage available in the SSEL file for a sample enterprise.

It is possible to select an organizational structure sample from the SSEL on the basis of company enterprise, legal entity

(EI number), establishment, or a combination of establishments (reporting units). Such a sample would have the SSEL number on each establishment, and access to the record would be through the use of that number.

Many programs will be able to use the SSEL numbers as their prime, direct access to specific records in the files. But an interim system providing additional agency identification numbers will be necessary for other programs to enable those programs to continue without substantial change. Presently, the Social Security Administration is working with the Bureau of the Census to include the Social Security Administration's establishment reporting plan number in the SSEL. The interim system, once established, will provide for automated linkage of the agency identification number to the SSEL establishment.

The system of linking the various agency identification numbers to the SSEL identification number (ID) through the use of "on-line" indexing is under consideration. Such a system could provide for immediate interchange between the SSEL ID, the EI numbers, the unemployment insurance number, etc.

## LEGAL FORMS OF COMPANY AFFILIATION

This section presents definitions of legal forms of organization and some proposals on the handling of affiliation problems.

### Legal Forms of Organization

**Proprietorship.** A type of business organization in which one individual owns the business. Legally, the owner is the business and is characterized by unlimited liability, indicating all the proprietor's personal assets are available as security for his creditors.

**Partnership.** A type of business organization in which two or more persons agree on the amount of their contribution (capital and effort) and on the distribution of profits. A general partnership also has unlimited liability.

**Corporation.** A voluntary organization of persons, either actual individuals or legal entities, legally bound together to form a business enterprise. The corporation has limited liability and a perpetual life independent of its owners or of its individual officials.

**Cooperative.** A voluntary organization engaged in an economic activity which is established, owned, and operated by those persons who together will share the total benefits. A cooperative can engage in production, financing, or marketing. In a residential cooperative, each tenant is a stockholder by virtue of having bought the property, usually an apartment, that he occupies.

**Other Legal Forms of Organization.** Include estate, receivership, joint venture, investment trust, fiduciary trust, etc.

## Mixed Legal Forms of Organization

In establishing multiunit organizations, questions of affiliation arise. The following rules have been developed:

1. A sole proprietorship may not be affiliated to any other legal form, either as parent or subsidiary.
2. Stock ownership in a corporation by an individual or a partnership, even if they own the majority of stock, does **not** make the individual or partnership the parent of the corporation. The corporation remains a separate entity.
3. A corporation, if it is controlling partner in a partnership or if it owns the controlling interest in an investment trust, can be the parent.

## Foreign Affiliations

The SSEL includes domestic (U.S.) establishments of foreign firms with the foreign company as the parent and includes foreign subsidiaries or branches of domestic firms if reported in the Company Organization Survey. Beginning in 1974, the Company Organization Survey included a question on ownership or control by a foreign company. The report also includes a question on ownership of foreign subsidiaries. The replies to these inquiries are coded and added to the SSEL.

## Updating of Company Organization Structure

1. Changes in affiliation for multiunit companies and current survey single units are processed on a flow basis and accumulated and inserted into the file at the next update. Significant changes, defined as those record revisions that affect the operations of an existing current survey (e.g., an establishment added with an SIC that is in scope of a current survey), would be processed on a flow basis with notification of the change given to the respective survey area. Individual current survey specifications would be outlined by the users and programmed to automatically transmit approved edited changes.
2. The single-unit employer firms on the SSEL will be updated annually. Among the several sources are the annual income tax returns, the wage reports, and the accumulated births. Generally, this operation will be a merger of some new data with the existing information.
3. The system will have the capability to produce tapes of specific changes made as well as reference tapes for users' convenience in these updates.

The SSEL records for establishments and companies will contain the previous owners' ID number along with the successors'. The predecessor/successor link will make feasible an-

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nual merger and acquisition studies. For specific surveys in which the plant or other facility is important, a permanent plant number may also be assigned in addition to the SSEL number. The Annual Survey of Manufactures is an example of such a survey.

The rules for processing changes and additions to the organizational structure of the SSEL have been developed using the following criteria:

1. All incoming organizational structure change records (deletes, added establishments, etc.) are edited for duplication, conflicting information, etc.
2. Tolerance limits have been established based on significance.
3. Successive steps are based on significance of report or change (clerical or professional review, company contact, verification before final acceptance or change, etc.).



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## APPENDIX A

### Special Rules for the Determination of an Establishment

For firms engaged in agriculture, construction, transportation, communications, electric, gas and sanitary services, and similar types of physically dispersed activities, each individual site, project, field, network, line, or system is not treated separately. For these types of activities, establishments would be only those relatively permanent main or branch offices, terminals, stations, etc., that are either (a) directly responsible for supervising such activities, or (b) the base from which personnel operate to carry out these activities. Personnel who do not primarily work at a single establishment (traveling salesmen, technicians, engineers) would be included as separate entries using the addresses of the locations from which they are paid. Exceptions to the general establishment definition include—

#### 1. Construction sites

- a. In the case of a joint venture (a separate legal entity formed to undertake a specific construction project by two or more firms, at least one of which is a construction firm), a separate establishment would be set up for the joint venture entity.
- b. To the extent that separate legal entities are set up to carry out only a given project or part of a project, then each such legal entity is defined as a separate establishment for reporting purposes.

2. Retail store made up of a series of leased departments. This retail store is defined as one establishment, not one establishment for each leased department.
3. For mineral industries, the oil and gas consolidated establishment is defined as total operations within a State. Offshore operations will be defined as separate establishments affiliated with each State. Also, contract service operations can be consolidated at the State level as an establishment.
4. Farms. Places on which agriculture operations larger than a specified minimum were conducted at any time during the year under the control of an individual management. Places of less than 10 acres are classified as farms if the sales of agriculture products amounted to at least \$250 for the year or the latest dollar figure established. Places of 10 acres or more are classified as farms if the sales of agriculture products is more than \$50 for the year or the latest dollar figure established.

For geographic coding, the location of a farm that has acreage in two or more counties is assigned to the county having the largest portion of total land.



## APPENDIX B

### Illustration of Company Organization and Reporting Unit Links

Unit	Name	Address	SSEL number	Check digit	El number	Check digit	Employment size code	SIC	Reporting unit link codes
Enterprise	Company A	New York City	899999 0000	7	13-0157276	2	80	22A	
Subsidiary	Eastern A	Philadelphia	899999 0001	5	22-0176432	7	70	(8) 2211 (CAO)	Z-1
Establishment	Eastern plant 1	Philadelphia	899999 0002	3	22-0176432	7	60	2211	R-6, W-4
Establishment	Eastern plant 2	Pittsburgh	899999 0005	6	22-0176432	7	60	2211	R-6, W-4
Establishment	Eastern plant 3	New Haven	899999 0006	4	22-0176432	7	50	2211	R-6
Subsidiary	Western A	Oakland	899999 0007	2	93-0015741	0	60	(8) 3079 (CAO)	Z-1
Establishment	Western plant 5	St. Louis	899999 0008	0	93-0015741	0	31	3079	—
Establishment	Western plant 6	Denver	899999 0009	8	93-0015741	0	32	2211	R-6
Establishment	Western plant 7	Portland	899999 0010	6	93-0015741	0	60	3079	—
Survey Z-1. Enterprise Capital Expenditures									
One reporting unit	Company A	New York City	899999 9901 <sup>1</sup>	9	13-0157276	2	80	(8) 2211 (CAO)	Z-1
Survey R-6. Monthly Production of Product 2211002									
One reporting unit	Company A	New York City	899999 9902 <sup>1</sup>	7	13-015276	2	70	(8) 2211 (CAO)	R-6
Survey W-4. Wage Rates of Occupation X in Pennsylvania									
One reporting unit	Eastern A	Philadelphia	899999 9903 <sup>1</sup>	3	22-0176432	7	70	(8) 2211 (CAO)	W-4

<sup>1</sup>99 indicates reporting unit, not a plant.



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## WORKING PAPER 3

# Size Classification of Economic Characteristics

## INTRODUCTION

The development of the Standard Statistical Establishment List for use by the Federal statistical community is being undertaken by the Census Bureau with the goal of modernizing and standardizing the means by which various statistical agencies of the government collect and process information. The SSEL will consist of a central multipurpose computerized name and address file of all known multiestablishment and single-establishment employer firms (and nonemployer agricultural firms) in the United States. Such a list, which will be regularly updated for employer cases, will eventually provide government statistical units with a common frame for the selection of sample lists to meet the needs of their various statistical programs.

To implement the general purpose file concept which would encourage existing independent programs to adopt the SSEL as the representative universe, the SSEL system proposes to incorporate indicators for the size range of various economic characteristics of each establishment included in the universe.

This is the third in a series of working papers covering the proposed design and operation of the Standard Statistical Establishment List. This paper will describe the manner in which the SSEL proposes to implement a system for classifying establishments and enterprises represented in the SSEL by size classes of economic characteristics, as well as the objectives of such a system.

## NATURE AND OBJECTIVES OF SIZE CLASSIFICATION SYSTEM

The Annual Company Organization Survey will be the basic source of raw economic data for multiestablishment companies and their establishments in the SSEL. Data for single-establishment firms and nonresponse multiestablishment firms will be obtained from the administrative records of various Federal agency programs. (A more detailed description of the proposed data sources to be utilized by the SSEL follows on p. 21.)

Inasmuch as the confidentiality of a firm's operations must be preserved, the SSEL will utilize a uniform set of size codes in its representation of economic characteristics. More specifically, SSEL disclosure regulations prohibit the release of data if the operations of a particular establishment or firm may be disclosed. Because size codes represent a relatively broad range of economic data, a size-classification system will preserve the integrity of SSEL files and prevent the disclosure of an individual establishment's operations.

With the implementation of the SSEL and the representative size-class codes contained therein, the need for a user agency to verify its sampling criteria through the use of supplemental report form inquiries as to the true size of the firm's economic characteristics should be precluded. The agencies should be able to select their samples from the SSEL with confidence that the economic characteristics of the universe, the validity of which is essential to meaningful and efficient sampling, are accurately and currently maintained. The surveys of government statistical agencies will then be better able to specifically focus their inquiries to appropriate data items. Specialization of this nature should be possible because participants in the SSEL can be confident that such housekeeping operations as updating and maintenance of size classes, updating SIC codes, shifts in physical location, reorganizations of company structure, mergers, etc., will be a regular and constant phase of SSEL processing.

It is through the use of a size-class system and other descriptive codes that the SSEL will meet the sampling and processing needs of user agencies. In addition to size-class codes, the data records for each organizational unit in the SSEL will contain the following minimum information:

- Company name, mailing address and physical location
- Industry codes
- Geographic codes
- Legal form of organization
- Employer identification (EI) number or numbers
- SSEL file number
- Survey identification number

SSEL size-class codes will depict a range of economic activity for individual records that will be maintained for the enterprise (parent company), legal entity (EI number), and establishment level of company organization. In addition to delineating the aforementioned organizational levels, the SSEL will provide an identifying record for those administrative or statistical programs that are predicated on the reporting unit (or similar) concept. Working Paper 2 contains a more detailed presentation of organizational structure and its application for the SSEL.

The Standard Statistical Establishment List proposes to utilize a standardized system of size-class codes to represent a number of economic variables for each of the levels of company organization mentioned above. The SSEL currently carries codes indicating size ranges for total first-quarter employment and annual payroll. It is proposed that as soon as the

appropriate data can be obtained, the SSEL incorporate size-class codes representative of the following additional economic characteristics:

1. **Total Value of Sales/Receipts**—Covering total operations of each establishment and enterprise.

2. **Inventories**

3. **Secondary Sales/Receipts**—It is proposed that the SSEL provide record space for size-class codes to indicate the size range of the establishment's significant secondary sales/receipts activity at the 4-digit SIC level. For establishments existing on the SSEL file, the data for secondary size-class codes will be supplied and updated by statistical programs of participating members. For new establishments added to the organizational structure of an enterprise on the Annual Company Organization Survey, secondary-activity size codes will be developed based on reported percentages of sales/receipts. More specifically, the COS report form will enable the respondent to provide a more detailed listing of the various merchandise lines or activities engaged in by the establishment, as well as the percentage part of total establishment activity that each line represents. From the reported percentages, secondary sales/receipts activity can be identified and separately represented in the SSEL.

To avoid excess record content, secondary sales/receipts activity of less than \$100,000 per year will not be separately identified in the record. Five broad size-class ranges are proposed for use in representing secondary sales/receipts volume, as follows:

\$100,000-\$249,999	Code 1
\$250,000-\$499,999	Code 2
\$500,000-\$999,999	Code 3
\$1,000,000-\$1,999,999	Code 4
\$2,000,000 or more	Code 5

It is also proposed that the record contain a size-class indicator (similar to the above) reflective solely of the sales/receipts activity attributed to the establishment's primary operation, as indicated by the establishment's primary 4-digit SIC code.

An alternative to the primary indicator would be the use of an establishment specialization ratio, although there is some reservation to include both due to possible disclosure problems.

4. **Flexible Economic Characteristics**—The first three size-class codes (employment, payroll, sales/receipts) will eventually be maintained for all economic establishments. Additionally, the SSEL proposes to incorporate a flexible size-class indicator to be dependent on the statistical interest in the activity in which the establish-

ment is engaged. Examples of possible uses of the flexible indicator might include the following:

Establishment activity	Versatile indicator could represent—
Warehousing	Number of square feet of warehouse storage capacity
Banking	Total assets
Wholesale trade	Amount of commission receipts

The data necessary to assign size codes for the variable indicators would be requested on the Annual Company Organization Survey and could be facilitated by computer imprinting of the report form according to the establishment SIC (e.g., establishment warehouse, SIC 4225, would trigger an imprint of storage capacity in the fifth data item cell on the report form).

The inclusion of additional economic indicators (assets, etc.) is possible to the extent that specific data are available from administrative records for single-establishment companies, and can also be reported at the establishment level for multiunit companies, to meet the general-purpose statistical needs of users.

The SSEL universe list will be represented by, and accessible through, a system of individual establishment size codes that do not disclose the establishments' operations. Accurate sampling requires the user agency to know more precisely the characteristics of the universe, i.e., the distribution of the component parts among the various strata. Without such detailed information, the concept of a multiuser-oriented SSEL would be limited.

To obtain a statistical description of the universe of SSEL establishments and facilitate meaningful sampling (cells to be studied, sampling ratios to be used, weights to be assigned, etc.), the user agency will reference the **City and County Business Patterns** (CCBP) publication. (Working Paper 7, "Scope and Content of the City and County Business Patterns Program," provides a detailed explanation of the publication.) Contained therein will be a comprehensive presentation of raw industry data as collected for the reference year in the CCBP program. Data shown in the first publication, covering 1974, included total number of establishments, total first-quarter employment, first-quarter payroll, annual payroll and number of establishments distributed by employment size class by SIC industry and area.

Summary data for counties, States, and the United States will also be provided. Future publications will be expanded to include value of sales and receipts, place (city) data, and SMSA data. The value data contained in the CCBP will allow the user agency to make an accurate study of the universe (or part thereof) and arrive at an efficient sample.

After utilizing the **City and County Business Patterns** publication to determine the sampling scheme that will best represent the universe to be studied, the user agency could then



select its sample list from SSEL files by means of various representative codes (SIC, geographic location, size class, etc.) that describe the contents of the SSEL. Thus, sample selection for a user agency would employ the following two components: **City and County Business Patterns**, as described above, and the Standard Statistical Establishment List universe (over 4 million employer establishments) represented by descriptive codes such as SIC, size class and geographic location.

A standardized system of size codes may not satisfy the statistical prerequisites of all programs conducted by Government agencies, since such a classification system is, by necessity, a compromise methodology. To meet the sampling and processing needs of statistical programs that cannot be accommodated by the standard size-code ranges, the SSEL will have the capability to develop a limited number of custom size codes. Care must be taken that the development of additional codes does not create disclosure problems.

Custom codes are possible since the raw data from which size codes are derived will be retained for at least 2 years subsequent to the reference year. Using these data, the SSEL can provide size ranges that will better distribute the universe of establishments, as befits the particular needs of an agency's special project or unique programs.

It is a basic SSEL premise that under no circumstances will use of the SSEL result in disclosure of data pertaining to the operations of any individual establishment or firm. Individual data records used to compile statistical aggregates are not available for separate inspection. As noted earlier, the SSEL will utilize a standardized system of size-class codes in its representation of economic characteristics, thus preserving the integrity of individual establishment data. For eventual publication criteria, general guidelines will be jointly developed by the interagency committee for uniform release of resulting data.

## DATA SOURCES FOR ECONOMIC CHARACTERISTIC SIZE CODES

The most recent economic and agriculture censuses and administrative record information will provide the SSEL with its original universe list. Firms previously not within the scope of the economic census were identified and contacted as part of a separate survey and will be included in the SSEL. As the SSEL develops to an operational level, a variety of current source inputs are proposed to update and maintain the size characteristics of the SSEL universe, including those below.

Initially, the reported data used to derive size codes and subsequent updates will include first-quarter employment and first-quarter and annual payroll. When feasible, values for sales and receipts (both total and secondary), inventories and additional economic characteristics (which will vary for particular establishments) will be obtained through member programs and will be represented by size-class indicators.

Program	Number of respondents covered (1,000)	Size data provided
Economic censuses	2,500 establishments	Employment, payroll, sales and receipts, inventories, fifth variable indicator
Agriculture censuses	3,000 establishments and/or farms	Sales and receipts, inventories
Annual Survey of Manufactures	70 establishments	Employment, payroll, sales and receipts, inventories, fifth variable indicator
Current Industrial Reports <sup>1</sup>	150 establishments	Secondary sales and receipts
Current Business Surveys <sup>1</sup>	100 establishments	Secondary sales and receipts
Annual Company Organization Survey	150 companies, 1,000 establishments	Employment, payroll, sales and receipts, inventories, fifth variable indicator
Social Security Administration (births reactivations)	800 EI numbers	Employment and payroll until 1978
Internal Revenue Service	4,000 EI number	Employment, payroll, sales and receipts

<sup>1</sup> Those current programs that do not clearly cover the total operations of the establishment will be used to update size codes only for the activity covered, if large enough to be separately identified in the establishment record.

The SSEL also proposes for future implementation the use of additional current programs of qualifying statistical units as source inputs for the SSEL universe. Currently, potential suppliers are determining if information they might provide to the SSEL (and, in turn, to other agencies) can be furnished under their present legislative or administrative authority, or if changes in such authority must be sought.

To ensure that potential sources of size data have maximum application for the SSEL, the following criteria are proposed for accepting data input to update establishment size codes:

1. The data must originate from a full year report. Surveys covering only a month or a quarter will not be considered for SSEL input, thereby eliminating data of a seasonal nature or values that may be concentrated in particular months. In those instances where the monthly or quarterly survey clearly represents an end-of-year "stock" figure, the data item will be incorporated.

2. Only programs that cover an establishment's entire economic operation should be used to update the SSEL. Programs that collect data for isolated segments of an establishment's operation (such as some current surveys) will be used to update secondary size-class codes only, if significantly large enough to be separately identified.

## Administrative Records

To avoid duplication of effort, the SSEL proposes to make extensive use of administrative record data available from the Internal Revenue Service and the Social Security Administration.

The SSEL proposes that, in the future, additional administrative record information be obtained from the Bureau of Labor Statistics to further reduce the incidence of duplicate mailing for similar information. Several major programs conducted by BLS appear to be potential data inputs for the SSEL, most notably for employment and payroll data and SIC codes.

The following data items are proposed for transfer to SSEL records on a flow basis from IRS and SSA:

First-quarter employment—obtained from SSA 941 Schedule A file through data year 1977. Beginning in 1978, employment data will be received from IRS.

Quarterly payroll—obtained from IRS 941 files

Annual payroll—summation of four quarters of IRS 941 files

Total value of sales and receipts—obtained from IRS 1120, 1120L, 1120M and 1120S (corporations), 1065 (partnerships), 1040 Schedule C (single proprietorships), and appropriate 990 series tax forms

Each quarter of administrative record data items, as they are entered in the SSEL records, will be matched against the previous quarter and edited for consistency. Thus, extreme data changes will be identified, reviewed and corrected, if necessary. Imputation techniques based on previously reported data will be used to estimate values for any missing data items.

The administrative record data in SSEL files will basically serve three purposes, as follows:

1. To estimate size codes for companies not responding at the time of annual closeout of the Company Organization Survey, as well as for single-unit firms and those small nonmail multiestablishment firms not canvassed every year. Although administrative record data will be entered in SSEL files as they become available, size-class codes will only be derived annually.
2. Provide the City and County Business Patterns program with actual data values for nonmail firms, both multiestablishment and single-establishment.

3. Consistency checks will be possible for data reported on other SSEL inputs. Inasmuch as IRS and SSA collect data basically for the EI or legal entity, general SSEL edits of administrative records will not be possible below that organizational level.

## Multiestablishment Companies

Although the Company Organization Survey will provide data for the majority of multiestablishment firms in the SSEL, various other programs are proposed for providing data on a regular basis for many of the establishments contained in the SSEL universe. An integral part of SSEL processing will be the comparison and editing of data for companies that report on more than one survey. This technique will allow the identification of inconsistent or erroneous reporting and will insure that data inputs to the SSEL are of a quality nature. Those cases identified as not being within normal parameters will be reviewed for any inconsistencies.

Codes will be used to indicate the source of updates to SSEL files, the nature of the update (i.e., reported or estimated) and the year of the update. In addition, SSEL records will carry historic size codes, required for those agency programs that utilize a fixed period sample.

For those multiestablishment companies that have not responded on the Annual Company Organization Survey (or other sources) by the time of annual closeout, administrative record data will be utilized to obtain data values and representative size codes. Reported data received after the closeout of company organization processing will be included in the data tabulations for **City and County Business Patterns** and could be made available to interested users.

Several administrative record programs use a unique grouping of establishments (reporting unit) or the legal entity (EI number) level of company organization as the basic unit for the compilation of economic data. To accurately apportion these data down to the establishment level, the SSEL will use distribution techniques based on previously reported establishment data.

## Nonmail Multiestablishments

All small multiestablishment companies will not be updated on an annual basis. Historical patterns indicate that a survey of these types of companies once in 2 or 3 years would be adequate for accurate representation and thus insure optimum use of SSEL funds and control of respondent reporting burden as well as SSEL processing time. Small multiunit companies with less than 50 employees are contacted during each economic census and once between censuses.

Administrative record data are used as a supplement to the rotational mailing scheme to ensure that significant changes in size patterns do not go unrecognized.



Company-level size classes for smaller firms are more sensitive to change than are size classes for large organizations, in that the smaller size classes represent a more narrow range of data. This would be useful, during an annual comparison to administrative records, for reflecting changes in size, as well as any organizational or structural changes in employment and payroll.

The employment and payroll size data that currently exist for multiestablishment firms (derived from the 1972 economic censuses or latest Company Organization Survey) are compared yearly with TE and PR data extracted from SSA and IRS files. The comparison is made on an EI- and company-level basis and if the administrative record data reported for a particular EI or company indicates a significant change in size, the company is flagged for review. In this way, any structural or other changes in the company's operations that might be responsible for the changes in economic data values can be recognized.

Those companies for which current year administrative record data reveal no significant changes from previous year reported economic data will have establishment-level size codes redetermined, based on the distribution of company-level data among the establishments. To assign accurate size codes at the establishment level, past patterns of reported establishment data will be referenced and used as a benchmark for apportioning the current year administrative record data. The prime base of distributing data will be the latest reported annual Company Organization Survey or the economic censuses.

Generally, if any of these smaller multiestablishment companies showed no departure from known size classifications, as revealed by an annual comparison to administrative record data, they would retain their mailing frequency (i.e., companies with less than 50 employees mailed five times in 11 years and companies with 50 or more employees mailed on an annual basis).

### Single-Establishment Firms

Although selected large single-establishment firms will be mailed in the annual Company Organization Survey to check on growth and company affiliation developments, data for most of these single-establishment firms will be derived from the administrative records of other Government agencies such as SSA, BLS and IRS. More specifically, employment values will be obtained from SSA's 941 "A" file and values for quarterly and annual payroll will come from the IRS 941 file. Beginning in data year 1978, employment data will also be received from IRS. IRS 1120, 1120S, 1065, 1040 Schedule

C and 990 series tax returns will provide the SSEL with total value of sales and receipts data for single-establishment firms. For those single-establishment firms with more than one source of administrative record input, editing techniques will be employed to identify extreme data changes for analyst review.

### Zero-Employee Firms

Zero-employee firms have not been recognized as a formal component of the SSEL for regular maintenance purposes (although the agriculture segment of nonemployers is considered an integral part of the SSEL). However, a complete file of zero-employee cases can be made available to user agencies from the 5-year economic censuses for research and tabulation purposes. A size code will be used to indicate the range of sales and receipts for these firms, the data for which will be obtained annually from IRS administrative records if user demand is significant. Otherwise, complete updates for non-employer firms will occur only during the 5-year economic censuses.

## PROPOSED SIZE-CLASS CODES

Publications of major Federal statistical agencies have been researched in an attempt to arrive at a meaningful number of uniform general-purpose size codes. Information sources describing the sampling and processing operations of many programs were examined so that a size-code system with maximum utility for all users could be developed.

Appendix A delineates the agencies researched and the economic data collected and/or published by each. In many instances, an agency publishes the data as total values for a certain characteristic (such as SIC or region) and uses no size-range criteria. Also, the data used by some agencies in their analysis and presentation are collected by a separate source agency.

Appendixes B and C list size ranges currently in use by several agencies for employment and sales and receipts values, respectively. Appendix D presents the proposed size ranges and representative codes to be used in the SSEL for employment, sales and receipts, payroll and inventories, respectively. In all cases, the codes will be utilized for all levels of company organization (i.e., establishment, legal entity, enterprise and reporting unit). The size code representative of the legal entity, enterprise or reporting unit will be derived by the summation of data for those establishments comprising the particular organizational level being represented.

## APPENDIX A

### Type of Data Available, by Agency

Agency	Employment	Payroll	Value of sales and receipts	Inventories	Variable data <sup>1</sup>
Census Bureau					
Economic census	X	X	X	X <sup>2</sup>	X
ASM	X	X	X	X <sup>2</sup>	X
Current surveys	X <sup>3</sup>	X <sup>3</sup>	X <sup>3</sup>	X <sup>2 3</sup>	X <sup>3</sup>
COS	X	X			
SSA	X <sup>2</sup>	X			
IRS	X <sup>2</sup>	X	X		X
BLS	X	X <sup>2</sup>			
Federal Reserve Board	X <sup>2 4</sup>	X <sup>2 4</sup>	X <sup>2 4</sup>	X <sup>2 4</sup>	X <sup>2 4</sup>
Council of Economic Advisors	X <sup>2 4</sup>	X <sup>2 4</sup>	X <sup>2 4</sup>	X <sup>2 4</sup>	X <sup>2 4</sup>
Securities and Exchange Commission	In general, collected for regulation and not regularly published.				
Federal Trade Commission			X <sup>2</sup>	X <sup>2</sup>	X
BEA	X <sup>2 4</sup>	X <sup>2 4</sup>	X <sup>2 4</sup>	X <sup>2 4</sup>	X <sup>2</sup>

<sup>1</sup> Indicates data available for variable indicator, such as assets, warehouse space, commission receipts, capital expenditures.

<sup>2</sup> Data are published as total for SIC or areas, size ranges not used.

<sup>3</sup> For current surveys covering only part of an establishment's operations, data used for secondary size-class codes only.

<sup>4</sup> Published data are collected by separate source agency, usually BLS or Census Bureau.

# **APPENDIX B** **Employment Size Ranges Currently in Use**

Number of employees	Proposed SSEL size-code ranges	Existing size-code ranges—as published						
		Economic census			Enterprise statistics	County Business Patterns, Census-SSA	BLS 790 program	
		Wholesale	Retail and services	Mfg/mining/ construction				
0	X	0	0	0	0	X		
1		1	1					
2		2	2					
3	1-4	3	3	1-4	1-4	1-3	0-3	
4								
5		4-5	4-5					
6						4-7		
7	5-9	6-7	6-7	5-9	5-9		4-9	
8								
9		8-9	8-9					
10								
11								
12	10-14	10-14	10-14					
13								
14						8-19		
15				10-19	10-19		10-19	
16								
17	15-19	15-19	15-19					
18								
19								
20	20-49	20-49	20-49	20-49	20-49	20-49	20-49	
	50-99	50-99	50-99	50-99	50-99	50-99	50-99	
	100-249	100-499	100 & over	100-249	100-249	100-249	100-249	
	250-499			250-499	250-499	250-499		
	500-999	500-999		500-999	500-999	500-999		
	1,000-1,999	1,000 & over		1,000-2,499	1,000-2,499	1,000-1,499		
	2,000-2,999			2,500-4,999	2,500-4,999	1,500-2,499		
	3,000-3,999					2,500-4,999		
	4,000-4,999			2,500 & over	5,000-9,999	5,000 & over	1,000 & over	
	5,000-5,999							
	6,000-6,999							
	7,000-7,999							
	8,000-8,999							
	9,000-9,999							
	10,000-24,999							
	25,000-49,999							
	50,000-99,999							
	100,000 & over							
				100,000 & over				

thru

thru

100,000 & over

# APPENDIX C

## Sales/Receipts Size Ranges Currently in Use

(In thousands of dollars)

Proposed SSEL size-code ranges	Census			Enterprise statistics	IRS	
	Services	Retail	Wholesale			
<div>Less than \$1,000</div> <div>\$1,000-\$1,999</div> <div>\$2,000-\$2,999</div> <div>\$3,000-\$4,999</div> <div>\$5,000-\$9,999</div> <div>\$10,000-\$14,999</div> <div>\$15,000-\$19,999</div> <div>\$20,000-\$29,999</div> <div>\$30,000-\$49,999</div> <div>\$50,000-\$99,999</div>	Less than \$10,000	Less than \$10,000	Less than \$100,000	<div>Less than \$10,000</div> <div>\$10,000-\$49,999</div> <div>\$50,000-\$99,999</div> <div>\$100,000-\$199,999</div> <div>\$200,000-\$499,999</div> <div>\$500,000-\$999,999</div> <div>\$1,000,000-\$4,999,999</div> <div>\$5,000,000-\$9,999,999</div> <div>\$10,000,000-\$24,999,999</div> <div>\$25,000,000-\$49,999,999</div> <div>\$50,000,000-\$99,999,999</div> <div>\$100,000,000-\$249,999,999</div> <div>\$250,000,000-\$499,999,999</div> <div>\$500,000,000-\$999,999,999</div> <div>\$1,000,000,000-\$4,999,999,999</div> <div>\$5,000,000,000-\$9,999,999,999</div> <div>\$10,000,000,000-\$24,999,999,999</div> <div>\$25,000,000,000-\$49,999,999,999</div> <div>\$50,000,000,000-\$99,999,999,999</div> <div>\$100,000,000,000-\$249,999,999,999</div> <div>\$250,000,000,000-\$499,999,999,999</div> <div>\$500,000,000,000-\$999,999,999,999</div> <div>\$1,000,000,000,000 &amp; over</div>	Less than \$25,000	
						\$10,000-\$19,999
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						\$50,000-\$99,999
						\$100,000-\$199,999
						\$200,000-\$299,999
						\$300,000-\$499,999
						\$500,000-\$999,999
						\$1,000,000-\$1,999,999
<div>\$2,000,000-\$299,999</div> <div>\$300,000-\$499,999</div> <div>\$500,000-\$999,999</div> <div>\$1,000,000-\$1,999,999</div> <div>\$2,000,000-\$4,999,999</div> <div>\$5,000,000-\$9,999,999</div> <div>\$10,000,000-\$14,999,999</div> <div>\$15,000,000-\$19,999,999</div> <div>\$20,000,000 &amp; over</div>	\$100,000-\$299,999	\$100,000-\$299,999	<div>\$100,000-\$199,999</div> <div>\$200,000-\$299,999</div> <div>\$300,000-\$499,999</div> <div>\$500,000-\$999,999</div> <div>\$1,000,000-\$1,999,999</div> <div>\$2,000,000-\$4,999,999</div> <div>\$5,000,000-\$9,999,999</div> <div>\$10,000,000-\$19,999,999</div> <div>\$20,000,000 &amp; over</div>	<div>\$50,000-\$99,999</div> <div>\$100,000-\$199,999</div> <div>\$200,000-\$499,999</div> <div>\$500,000-\$999,999</div> <div>\$1,000,000-\$4,999,999</div> <div>\$5,000,000-\$9,999,999</div> <div>\$10,000,000-\$24,999,999</div> <div>\$25,000,000-\$49,999,999</div> <div>\$50,000,000-\$99,999,999</div> <div>\$100,000,000-\$249,999,999</div> <div>\$250,000,000-\$499,999,999</div> <div>\$500,000,000-\$999,999,999</div> <div>\$1,000,000,000-\$4,999,999,999</div> <div>\$5,000,000,000-\$9,999,999,999</div> <div>\$10,000,000,000-\$24,999,999,999</div> <div>\$25,000,000,000-\$49,999,999,999</div> <div>\$50,000,000,000-\$99,999,999,999</div> <div>\$100,000,000,000-\$249,999,999,999</div> <div>\$250,000,000,000-\$499,999,999,999</div> <div>\$500,000,000,000-\$999,999,999,999</div> <div>\$1,000,000,000,000 &amp; over</div>	\$25,000-\$49,999	
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						\$15,000,000-\$19,999,999
						\$20,000,000 & over
						\$5,000,000-\$9,999,999
						\$10,000,000-\$14,999,999
						\$15,000,000-\$19,999,999
						\$20,000,000 & over
						\$5,000,000-\$9,999,999
						\$10,000,000-\$14,999,999



## APPENDIX D

### Proposed SSEL Size Codes

#### Employment

Employment size codes	Number of employees	Employment size codes	Number of employees	Employment size codes	Number of employees
10	1-4	80	500-999	92	8,000-8,999
15	5-9	85	1,000-1,999	93	9,000-9,999
20	10-14	86	2,000-2,999	94	10,000-24,999
30	15-19	87	3,000-3,999	95	25,000-49,999
40	20-49	88	4,000-4,999	96	50,000-99,999
50	50-99	89	5,000-5,999	97	100,000 or more
60	100-249	90	6,000-6,999		
70	250-499	91	7,000-7,999		

#### Sales/Receipts

Sales/receipts size codes	Value of sales/receipts	Sales/receipts size codes	Value of sales/receipts	Sales/receipts size codes	Value of sales/receipts
A	Less than \$1,000	H	\$20,000-\$29,999	P	\$1,000,000-\$1,999,999
B	\$1,000-\$1,999	I	\$30,000-\$49,999	Q	\$2,000,000-\$4,999,999
C	\$2,000-\$2,999	J	\$50,000-\$99,999	R	\$5,000,000-\$9,999,999
D	\$3,000-\$4,999	K	\$100,000-\$199,999	S	\$10,000,000-\$14,999,999
E	\$5,000-\$9,999	L	\$200,000-\$299,999	T	\$15,000,000-\$19,999,999
F	\$10,000-\$14,999	M	\$300,000-\$499,999	U	\$20,000,000 or more
G	\$15,000-\$19,999	N	\$500,000-\$999,999		

#### Payroll

Typically, payroll size ranges are not used in Federal Agency publications. Payroll data are usually published as total values for SIC groups, geographic areas, or other characteristics. The limited ranges used by IRS and SSA are included here, but no attempt is made to incorporate them with proposed SSEL ranges, since they do not appear to have universal application.

SSEL payroll size codes	Payroll	SSEL payroll size codes	Payroll	IRS ranges	SSA ranges
A	\$1-\$499	L	\$400,000-\$999,999	\$1-\$499	\$1-\$599
B	\$500-\$1,499	M	\$1,000,000-\$1,999,999	\$500-\$1,499	\$600-\$1,199
C	\$1,500-\$4,999	N	\$2,000,000-\$4,999,999	\$1,500-\$2,499	\$1,200-\$1,799
D	\$5,000-\$9,999	P	\$5,000,000-\$9,999,999	\$2,500-\$4,999	\$1,800-\$2,399
E	\$10,000-\$24,999	Q	\$10,000,000-\$19,999,999	\$5,000-\$9,999	\$2,400-\$2,999
F	\$25,000-\$49,999	R	\$20,000,000 or more	\$10,000-\$19,999	\$3,000-\$3,599
G	\$50,000-\$74,999			\$20,000 or more	\$3,600-\$4,199
H	\$75,000-\$99,999				\$4,200-\$4,799
I	\$100,000-\$149,999				\$4,800-\$6,399
J	\$150,000-\$249,999				\$6,400-\$9,599
K	\$250,000-\$399,999				\$9,600 or more

#### Inventories

A table of other agency inventory size ranges is not included because there are no size ranges currently in use for publishing inventory values by any of the Federal Agencies researched. Actual data values are published for specific SIC's, geographic areas, or other characteristics.

Inventory size code	Inventory	Inventory size code	Inventory	Inventory size code	Inventory
1	Less than \$1,000	4	\$20,000-\$49,999	7	\$500,000-\$999,999
2	\$1,000-\$4,999	5	\$50,000-\$99,999	8	\$1,000,000-\$4,999,999
3	\$5,000-\$19,999	6	\$100,000-\$499,999	9	\$5,000,000 or more

#### Farms

Statistical Research Service (USDA) and Agriculture Division (Census) will develop this proposal. It will cover size categories unique to the farm portion of the SSEL.



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## WORKING PAPER 4

# Scope of Industrial Classification and Classification Problems

### INTRODUCTION

This is the fourth in a series of discussion papers covering the design, implementation, and operation of the Standard Statistical Establishment List (SSEL). The first three papers covered the scope, organizational structure, and size code characteristics of the SSEL.

The objective of this paper is to describe the proposed SSEL classification system including its methodology, capabilities, relationship with other existing classification systems, and potential classification problems. Conflicting code assignments, including proposed sources and frequency of update will be covered in Working Paper 6, SSEL Maintenance and Update System.

A major problem throughout the Federal statistical community has been the lack of comparability in statistical series purporting to cover the same universe, but collected and compiled through different programs. Differences among such series are attributed in part to the assignment of different SIC industry codes to essentially the same economic operation. Reasons for this include the following:

1. Agencies differ substantially in the amount and specificity of data and information available as a basis for industry coding.
2. Agency classification systems often assign an industry code to an individual firm based on the respondent's own written description of his economic activity, either as the primary element of the system or as a last resort when the activity is not clearly covered by the survey form.
3. The exact wording of a respondent's description may vary for each agency program since different people within a company supply written descriptions at various times throughout a survey year. In addition, individual interpretations of written descriptions may vary among coders depending upon the exact choice of words used, the order given, the degree of completeness, and the directions given to the respondent and coders.
4. The detailed level of reporting furnished to each agency (i.e. establishment, EI number, reporting unit, etc.) may result in different SIC codes being assigned for the same firm since all agencies do not code at the establishment level.

5. Corrections and updates to individual programs are separate, independent operations and therefore the current SIC status of a particular firm may vary for a period of time in different agency lists.

Some important industrial classification objectives of the SSEL are—

To provide a general-purpose file for determining and assigning industrial classification codes at the establishment level, based on a coordinated interagency interpretation of the latest **Standard Industrial Classification Manual**.<sup>1</sup>

To provide for coordinated joint use of the same SIC code supplied by varied user programs.

To permit the use of general-purpose report forms for updating SIC codes.

To reduce duplication of mailing to the same respondent for the same information by coordinating the various agency classification operations.

Typical examples of satisfying user SIC requests would include—

Transmitting an updated master tape at periodic intervals with SIC revisions to statistical units making extensive and continuous use of the files.

Providing the capability to generate and tabulate data in SIC order by certain size-code ranges, for research or publication by various user programs.

Acting as a service agency in selecting sample panels based on SIC and other user agency specifications.

### SIC SCOPE OF THE SSEL

The SSEL will include all economic activities at the establishment level with one or more paid employees, except private households.

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<sup>1</sup>Executive Office of the President, Office of Management and Budget, **Standard Industrial Classification Manual**, 1972.

Eighty percent of all agriculture establishments (farms) are nonemployers and yet constitute a major portion of the farms from which information for current surveys as well as the census of agriculture must be obtained. Therefore, the complete farm portion (both employers and nonemployers) is considered an integral part of the SSEL. See appendix A (p. 37) for a detailed list of economic activities to be included and excluded in the SSEL.

## INDUSTRY CLASSIFICATION SYSTEMS OF THE SSEL

### Examples of Present Industry Classification Systems

At present, each Federal agency's coding system and detail has been designed to meet its own program needs. For example, Internal Revenue Service (IRS) has an annual self-classification system based on a consolidated version of the SIC manual's four-digit industries that reflect principal industrial activity (PIA) codes for their corporation (1120) and partnership (1065) tax forms. IRS also assigns a PIA code to their proprietorship (1040C) tax forms based on the respondent's written description of the major activity.

Social Security Administration's (SSA) coding system is in conjunction with the mandatory SS-4 form, Application for an Employer Identification (EI) Number. Industry codes are assigned to each new EI number based on the respondent's written description of principal activity on the SS-4.

The Bureau of the Census coding system is primarily based on the respondent's reported data at the establishment level. In conjunction with each quinquennial economic census and some annual surveys, detailed product/sales/service dollar values are reported for the complete establishment operation, summarized to the four-digit level if needed, and the largest four-digit code assigned to the establishment.

Bureau of Labor Statistics (BLS) has a voluntary reporting system in which industry codes are assigned to reporting units based on the respondent's written description of principal activity.

Shown below are the coding systems of several government agencies and the number of classification categories currently in existence. Appendix B (pp. 38-39) shows specific classification comparisons by agency programs for selected illustrative SIC areas.

### Objectives of the SSEL Industry Classification Systems

The overall objective of industry classification in the SSEL will be to provide flexibility that will accommodate existing classification systems currently being used to cover establishments, EI numbers, enterprises, and reporting units. This will involve a primary four-digit classification code assignment at the lowest organizational unit, the establishment. By assigning the most detailed current classification code available (approximately 1,100 four-digit SIC codes from the latest

Government agency	Type of classification <sup>1</sup>	Total classification categories
<b>Internal Revenue Service</b>		
1. Partnerships and proprietorships	2- and 3-digit SIC	185
2. Corporations only	2- and 3-digit SIC	170
Social Security Administration	2-, 3-, and 4-digit SIC	900 (approx.)
Census Enterprise Program	3-digit categories or combinations thereof	200 (approx.)
Census Establishment Basis	4-digit SIC minimum	1,100 (approx.)
BLS	2-, 3-, and 4-digit SIC	650 (approx.)

<sup>1</sup> Codes are essentially at the SIC level indicated, although in some cases there will be deviations.

SIC manual) to each establishment with one or more paid employees, it will be possible to consolidate various four-digit levels to derive the enterprise classification or other classifications for agencies that utilize a broader classification, such as reporting units or the two- or three-digit SIC levels. Participating units can then utilize the SSEL four-digit system for classification purposes but still continue to publish at modified SIC levels. The derivation of the enterprise, reporting unit, legal entity, and establishment classification is discussed below. (See SSEL Industry Code Assignment, p. 31.)

### Treatment of Ownership Characteristics

In the latest SIC manual revision, the classifications were changed so that all establishments primarily engaged in the same economic activity are now classified in the same four-digit industry, regardless of their types of ownership. These changes provide for the classification of government establishments by their primary economic activity, in addition to type of owner. For example, government printing operations are now classified in the printing industry with an ownership code of government. Government administrative functions remain under government classification. The SSEL proposes that each establishment record contain a two-digit numeric code to indicate the establishment's type of ownership. The following list of ownership classifications provides continuity between the 1967 SIC and the 1972 revision.

#### SECTOR I - Government

Federal Government

Federal quasi-Government



State government  
 State quasi-government  
 Local government—county  
 Local government—city, town, village, or township  
 Local government—school districts  
 Local quasi-government  
 International or foreign government

## **SECTOR II - Private**

Profit corporations  
 Nonprofit corporations (except cooperatives)  
 Cooperatives or mutual associations (corporate only)  
 Cooperatives or mutual associations (noncorporate only)  
 Partnership  
 Sole proprietorship  
 Other—estate, receivership, joint venture, investment trust  
 fiduciary trust, etc.

The private sector of the above system can be incorporated into the SSEL since it corresponds in part to the present legal form of organization (LFO) codes. Refinements to the above system, including identification of other categories, will be considered based on user requirements.

## **INDUSTRIAL CLASSIFICATION STATUS OF THE SSEL WHEN OPERATIONAL**

The initial SSEL will contain classification codes based on a mixture of coding information. For example, classification codes for those establishments in the scope of the 1972 economic censuses have been derived from data reported in the economic censuses, and classification codes for establishments out of the scope of the economic censuses have been derived from sales/receipts data reported in percentages in the 1972 and 1973 Company Organization Surveys. Classification codes for establishments not covered by the above programs have been derived from classification card surveys in 1973 and 1974 and self-classification programs from administrative records. The 1973 and 1974 classification cards were mailed in order to obtain revised 1972 four-digit SIC codes for single-unit nonmail census establishments and consisted of the following groups:

1. Establishments not mailed in the 1972 economic census whose 1967 SIC was expanded to two or more 1972 SIC designations (including small out-of-scope and construction establishments).
2. Establishments that were reclassified during the economic censuses to a noncensus industry and for which a four-digit code was not assigned (i.e., insufficient detail to assign SIC code).

Zero-employee firms have not been recognized as a formal component of the SSEL for regular maintenance purposes (although the agriculture segment of nonemployers is considered an integral part of the SSEL). However, the zero-employee file, whose SIC codes are assigned by IRS (approximately 200 PIA codes versus proposed 1,100 SSEL codes), will be made available to user agencies from the quinquennial economic censuses for research and tabulation purposes. If funds are made available, the SSEL could maintain an unedited zero-employee file on an annual shared-cost basis, with the latest available PIA code.

In late 1975, the SSEL files were updated by the 1974 Company Organization Survey and 1974 administrative records. Establishments that did not have valid 1972 SIC codes were assigned a unique flag as an indicator for potential classification card mailout.

The table (p. 32) indicates the classification status of the file in 1975 for each of the four organizational units of the enterprise, including the level of coding assigned, the program sources used for this classification and criteria for code assignment.

Approximately 80 percent of the economic universe with one or more employees are single-establishment companies with one employer identification (EI) number. For these cases, the enterprise, legal entity and establishment are identical. Industry codes for these cases will be taken from census programs and administrative records using the Social Security Administration's classification system (900 codes versus 1,100 proposed SSEL codes). Whenever possible, four-digit SIC codes will be obtained for all establishments with employees. For those cases which have been assigned a modified four-digit code (i.e., birth EI numbers in some specific industry areas are assigned a three-digit code by SSA each month), the latest available SIC revisions from participating programs will be used.

## **SSEL INDUSTRY CODE ASSIGNMENT**

### **General Criteria and Objectives**

To implement standardized criteria for SIC input and changes, the SSEL proposes that classification code additions/changes be accepted in the following general priority:

1. Reports covering the complete year which include detailed classification data for the total establishment operation.
2. Reports covering the complete year with sales and receipts data reported in percentages for the total establishment operation.
3. Reports covering the complete establishment operation with sales and receipts data reported in percentages.
4. Reports covering the complete establishment operation with product and service information furnished by written description only.

Organizational level	Level of coding assigned	Program sources for classification	Criteria for code assignment
Enterprise	1972 3-digit categories	Economic census	Establishment payroll
Legal entity for multiestablishment companies	1972 4-digit SIC	Economic census and latest Company Organization Surveys	Establishment payroll
Establishment			
1. Multiunit establishments	1972 4-digit SIC	Economic census, latest Company Organization Survey and Annual Survey of Manufactures	Sales and receipts data, percent receipts and self-classification
2. Legal entity for single-unit establishments	1972 4-digit SIC and 1972 modified 4-digit SIC for SSA births	Economic census, latest Company Organization Survey, SSA, IRS, and 1973/74 classification cards	Sales and receipts data, percent receipts and self-classification
Reporting units (including divisions and current survey reporters <sup>1</sup> )	Various SIC levels	Economic census, latest Company Organization Survey, and SSA	Establishment payroll

<sup>1</sup> The SSEL will have the capability to identify reporting units in the file with their existing SIC code or derive their classification code from component establishment records.

5. Reports covering the complete establishment operation—classification code selected by the respondent from a furnished list (principally 2- or 3-digit PIA codes).

The main objective of SSEL industry classification code assignment is to incorporate those quality SIC codes derived from reported data and to verify significant differences in classification by other systems before their acceptance into the SSEL.

### Classification Code Sources

Based on the above criteria, the SSEL proposes that classification codes for new establishments added to the master file be accepted from the following sources in the priority shown on page 33.

When two sources for a new record have different SIC codes for the same establishment, the SSEL proposes that the above ranking of programs resolve the conflict (e.g., the SIC code from the highest priority source would be accepted). An overall system for updating SIC codes for existing establishments in the file will be covered in Working Paper 6, SSEL Maintenance and Update System.

### Specific Data Measure Criteria for Each Organizational Unit

Other specific criteria to be used in assigning SIC codes to establishments, legal entities, reporting units, and enterprises follow.

**Establishment-Level Assignment.** Each establishment will be assigned a primary four-digit industry code on the basis of its current primary activity, which is determined by its principal product or group of products produced or distributed, or services rendered. Outlined below are the data measures generally to be used within each division for assigning a four-digit classification code to each establishment of the SSEL.

Major classification activity	Data measure for 4-digit SIC code assignment
Agriculture, forestry, fishing, hunting, and trapping (except agriculture services)	Value of production
Mining	Value of production
Construction	Value of receipts
Manufacturing	Value of shipments
Transportation, communication, electric, gas, and sanitary services	Value of receipts or revenue
Wholesale trade	Value of sales
Retail trade	Value of sales
Finance, insurance, and real estate	Value of receipts
Services, including agriculture services	Value of receipts
Public administration	Employment or payroll

<b>Multiestablishment companies</b>	<b>Criteria for code assignment</b>	<b>Period of availability</b>	<b>Level of coding assigned</b>	<b>Industries covered</b>
Economic censuses	Sales and receipts data or self-classification	Every 5 years	4-digit minimum	Construction, mining, manufacturing, wholesale, retail, services, and transportation
Census of Agriculture	Production and receipts data	Every 5 years	4-digit minimum	Agriculture only
Annual Survey of Manufactures	Product and shipment data	Annual	4-digit minimum	Manufacturing only
Annual Company Organization Survey	Percent receipts	Annual	4-digit SIC	All industries
<b>Single-establishment companies</b>				
Economic censuses	Sales and receipts data or self-classification	Every 5 years	4-digit minimum	Construction, mining, manufacturing, wholesale, retail, services, and transportation
Census of Agriculture	Production and receipts data	Every 5 years	4-digit minimum	Agriculture only
Annual Survey of Manufactures	Product and shipment data	Annual	4-digit minimum	Manufacturing only
Social Security Administration	Percent receipts and self-classification	Births (one time)	3- and 4-digit SIC	All industries
Bureau of Labor Statistics <sup>1</sup>	Percent receipts and self-classification	Monthly, quarterly, annually	3- and 4-digit SIC	All industries
SSEL Refile System	Percent receipts and self-classification	Annual	4-digit SIC	All industries
Internal Revenue Service	Self-classification	Annual	2- and 3-digit PIA code	All industries

<sup>1</sup> Pending outcome of the BLS unemployment insurance number linked to the EI number.

Occasionally, the appropriate measure cannot be determined or estimated for each product or service provided by diversified establishments. In other instances, an industry classification based upon the recommended output measure will not represent adequately the relative economic importance of each of the varied activities carried on at such establishments, or the usual industry code assigned to such establishments (drug stores, motels, etc.). In such cases, employment or payroll may be used to determine the primary activity of these types of establishments, and in some cases the type of facility will determine the classification regardless of receipts or employment in the various types of activity within the establishment. Motion picture theaters, drug stores, and hotels are examples of establishments that are classified on the basis of the type of facility rather than by source of receipts or employment even though sales of refreshments, candy, etc., may constitute a major portion of the receipts of these establishments.

Another exception for assigning an industry code based on the recommended output measure is establishments which are affiliated with and primarily engaged in servicing establish-

ments of the same enterprise (e.g., the company and its affiliated legal entities) and are assigned a central administrative office (CAO) code by some programs. For example, a data processing firm that is owned by a group of affiliated establishments and does data processing for these establishments only, would be assigned a CAO code to the primary activity of the establishments being serviced. However, other programs which treat the data processing establishment as a separate legal entity would assign a data processing SIC code to this type of establishment. Therefore, the SSEL proposes to carry both codes in the record for these establishments since the structure of the company is different in some programs.

**Multiestablishment Legal Entity (EI) Code Assignment.** Industrial classification for the multiestablishment EI number will be derived by summing the payrolls for all of the individual establishments within the EI number with the same four-digit SIC code, comparing such totals by four-digit industry, and assigning to the EI number the four-digit SIC code of the industry with the largest total payroll. Payroll will be used as



the common data measure at the EI level since component establishments may cross division lines having noncomparable units of measure (e.g., wholesale value of sales to manufacturing value of shipments.).

When computing the EI-level classification, the SSEL proposes to exclude the payrolls of central administrative offices and auxiliaries and of sales branches and sales offices of manufacturing companies because these establishments are not considered primary activities at the aggregated level unless the EI consists of only these establishments.

**Reporting Units SIC Code Assignment** (to include divisions, combined reporter records, etc.). The SSEL will have the capability to retain a separate name and address record for programs that utilize special reporting units and be able to identify which establishments are included in the reporting unit. A prerequisite of the system would be that reporting units must be defined in terms of establishment units. In this way, as the establishments comprising a reporting unit are updated by other programs, the reporting unit SIC can also be updated based on user program specifications.

The objective of a centralized reporting unit identification and maintenance system would be to offer user programs maximum utility with minimum incidence of duplicate efforts if an existing program could discontinue their separate maintenance operations and make use of the regular SSEL maintenance and update system. However, single program use of unique reporting unit designations may not warrant centralized storage and maintenance expenses and suggests separate program maintenance for these unique units.

#### **Enterprise Classification Code Assignment.**

**1. ENTERPRISE SIC SYSTEM**—This system, like the SIC, is administered by the Office of Management and Budget (OMB)<sup>1</sup> for use in coordinating enterprise coding by all Federal agencies and will be used by the SSEL as the classification system for the enterprise. Basic principles of this system are (latest 1974 system)—

The industry classification for enterprises should be essentially compatible with that for establishments. However, the industrial activity patterns of enterprise organizations may in some instances result in enterprise industries crossing major economic groups or divisions.

The group of enterprises comprising an industry should be economically significant; that is, have 50,000 or more employees or annual business receipts of \$2 billion or more.

The group of enterprises comprising an industry should be engaged to a high degree in the activity defining the industry, preferably 70 percent or more for nonmanufacturing and 60 percent or more for manufacturing.

**2. PROPOSED CLASSIFICATION CODE ASSIGNMENT METHOD**—The SIC four-digit industry code assigned to each establishment will be the basic building block of the SSEL enterprise classification system. There are two basic ways to determine the enterprise industry classification, the “filter-down” or “filter-up” methods. The SSEL proposes to assign and maintain in the record an enterprise category for the company based on the “filter-down” process. For those programs that require an enterprise category based on the “filter-up” process or the partial activity of the enterprise, the SSEL will have the capability to derive this classification from component establishment records.

*“Filter-down” process.* The largest industry division (i.e., 10 areas including construction, wholesale trade, etc.) of each company is ascertained by summing individual establishment data such as value added, payroll or employment to the industry division level to determine the major division. Then each four-digit establishment within the largest industry division is converted to its corresponding enterprise industry category and the largest category based on the accepted data measure is assigned to the company. In this process, the enterprise code of the company must be a part of the largest industry division.

*“Filter-up” process.* Each four-digit establishment of the company is converted to its corresponding enterprise industry category. Then the largest enterprise industry category based on the accepted data measure is determined and assigned to the company. In this process, the enterprise code of the company does not have to be a part of the largest industry division.

**3. DATA MEASURE FOR DERIVING ENTERPRISE CLASSIFICATION**—Payroll data will be used as the enterprise and multiestablishment EI number classification measure for the following reasons:

The selection of the largest industry based on employment would be biased where firms are engaged in seasonal industries, since employment data collected in most statistical surveys represent the employment of a given period of time during one quarter of the calendar year only.

Sales and receipts data are less than ideal because inter-industry comparisons of the value of sales and receipts are often meaningless, especially for comparisons across division lines. The use of sales would require comparison of large wholesale trade sales against comparatively smaller service receipts. Even where intra-industry comparisons

<sup>1</sup> Responsibility for statistical policy was recently transferred from the Office of Management and Budget to the U.S. Department of Commerce, Office of Federal Statistical Policy and Standards.



are made, they are weak. In manufacturing, for example, shipments from plants in the same industry are affected by the extent of intra-plant transfers of integrated plants.

Ideally, the value added by the establishments to the goods and services should be the measure for determining the enterprise classification. However, unlike some of the other federally collected data items, value added is not available to all Federal statistical agencies and, in addition, is only available for all mineral industries, manufacturing and construction establishments in economic census years, or once every 5 years.

The use of payroll would eliminate many of these problems. For example: payroll is collected by various Federal agencies; payroll is available for all industries and will be collected annually for publication in **City and County Business Patterns** (originally **County Business Patterns**). The availability of IRS payroll data provides users the capability to evaluate and compare similar data series.

As in the case of the EI-level classification, the SSEL proposes to exclude the payrolls of central administrative offices and auxiliaries and of sales branches and sales offices of manufacturing companies when computing the enterprise category, unless the enterprise consists of these types of establishments only.

**4. ENTERPRISE CLASSIFICATION USED BY FEDERAL AGENCIES**—To determine the enterprise industry category, the Bureau of the Census uses the “filter-down” process currently covering only those areas of the enterprise included in the economic censuses. The Federal Trade Commission uses the “filter-up” system. A consolidated return is requested only from companies that own at least 50 percent of the stock of one or more other companies. For all such domestic corporations, the company is requested to list, by percentage of gross receipts, the primary products made and merchandise lines bought and resold that are taxable under the IRS Code. The FTC assigns an enterprise code to the industry category with the largest percentage of gross receipts.

The Securities and Exchange Commission has a similar system except that the organizational unit for SEC consists of the company and all subsidiaries included in the consolidated financial statements as they are submitted to the SEC.

Each IRS corporation income tax return represents one or two types of company reports:

The unconsolidated return of a single corporation representing a single EI number. However, each unconsolidated return may represent the entire business enterprise or merely one corporation of an affiliated group that chooses not to file a consolidated return. In 1972, all but 28,000 of the approximately 1,800,000 corporation tax returns were unconsolidated. This group consists of both single- and multiestablishment EI numbers.

The consolidated return of an affiliated business group consists of a parent corporation and one or more subsidiary corporations, each having its own distinct EI number. In 1972, the 28,000 consolidated tax return files covered approximately 130,000 single corporations.

For enterprise classification, IRS relies on self-designated classification by the respondent. On each corporation tax return, IRS requests the respondent to enter the specific industry group code based on the largest percentage of total receipts from a list of principal activity codes included with each tax return.

The majority of enterprise categories in the SSEL are modified three-digit level as compared to the latest **Standard Industrial Classification Manual**.

### Use of Resistance Coding

For sample surveys, SIC code resistance is designed to prevent the small shifts in statistics, which are statistically insignificant, where establishment data are weighted and the principal activity changes from year to year. Strict application of the principal activity rule would result in the shifting of establishments (and their figures on employment, value of sales and receipts, etc.) from one industry or another regardless of the magnitude of the change. To minimize possible distortions from one period to the next, a change in the general classification rule is made where small establishments are retained in the industry in which they were classified at the beginning of the sample. Large establishments that change their major activity from the previous period may also be retained in their previous year's classification unless the shift in major activity is significant.

For those statistical programs that incorporate a resistance formula for limiting establishment industry classification code changes from year to year, auxiliary storage capacity will be made available to accommodate different classification codes. However, the SSEL will evaluate systemwide criteria for resistance-type SIC codes as individual user specifications are identified. This is in accordance with the long range objective of the standardization principle of the SSEL, which is to promote multiagency use of the same universe file with an emphasis on the use on one classification code. To implement the general purpose file concept which would encourage existing independent programs to adopt the SSEL as the representative universe and drop their company organization-type surveys, the SSEL system will incorporate a limited number of additional controls and SIC codes for these programs. However, the SSEL will consider the most current four-digit SIC code assigned to the establishment based on the **SIC Manual** as the primary code.

### Secondary SIC Codes—Proposal

To accommodate sampling and current survey needs, secondary activity codes (four-digit) can be carried in the record. To avoid

excessive record content, secondary sales/receipts activity of less than \$100,000 per year would not be separately identified in the record. Secondary four-digit SIC codes of \$100,000 or more will be followed by one of the following broad size-class codes:

\$100,000-\$249,999	Code 1
\$250,000-\$499,999	Code 2
\$500,000-\$999,999	Code 3
\$1,000,000-\$1,999,999	Code 4
\$2,000,000 or more	Code 5

It is also proposed that the record contain a size-class indicator (similar to the above) reflective solely of the sales/receipts activity attributed to the establishment's primary operation, as indicated by the establishment's primary four-digit SIC code. This size breakdown will result in approximately one million additional data items.

### Other Coding Assigned

For those classification systems that utilize greater detail than four-digit coding, separate locations in the record will be available for additional coding such as kind of business and sub-industry codes, product class codes, and type of operation codes. Central administrative offices and auxiliary establishments will be distinguished from operating establishments by a unique type of operation code.

## SSEL SIC MAINTENANCE SYSTEM

Research is currently underway to estimate the volume of true SIC changes expected each year. A proposed system for updating classification codes on a periodic basis will be covered in Working Paper 6.

## FUTURE REVISIONS TO THE SIC

During implementation of future major revisions to the SIC, both old and new SIC codes will be retained until the coding transition is complete for all SSEL units. Computer coding will handle the routine one-for-one or combinations of SIC changes. When a four-digit industry is expanded to two or more categories, the revised establishment classification will be derived from the sources shown on page 33. The SSEL classification objective will be to avoid duplicate SIC requests to the same respondent by incorporating the latest available SIC revisions from participating programs and thereby contacting only the remaining nonresponse group.

In a separate location from old and new classification codes temporarily carried in the establishment record during major SIC revisions, a five-digit location will be reserved for the historic classification code for use in the time series studies. The fifth digit (numeric) of the historic code will represent the last year the old SIC code was known to represent the operation.

## AGENCY CLASSIFICATION PROBLEMS

The most pressing problem concerning Federal statistical programs and industrial classification involves inconsistent interpretations of the same economic activity. To reduce this inconsistency, the SSEL maintenance system (in cooperation with the Interagency Committee and OMB) will have a long-range goal of coordinating the various agency classification operations and standardizing report form instructions where respondents self-classify their operations.

Partial industry coverage is a problem with many agencies. Further discussions are needed to pinpoint these areas and to provide meaningful answers.

## CONCLUSION AND PROPOSED IMPLEMENTATION OF THE SSEL CLASSIFICATION SYSTEM

When the SSEL file is initially implemented, the majority of SSEL establishments will have been assigned a four-digit industry code. The SSEL system will, therefore, have the capability to consolidate various four-digit levels to derive the enterprise classification, or other agency classifications that utilize a broader classification, such as reporting units.

Final refinements to the SSEL classification system will be implemented on a flow basis as user requirements and associated costs are identified. These include—

1. Overall SSEL system for SIC updating and maintenance.
2. Reporting unit identification and maintenance.
3. Secondary SIC code identification and maintenance.
4. Implementation of the proposed SSEL treatment of ownership characteristics for all SSEL records.
5. Other SIC problem areas as identified by user agencies.

In addition, the SSEL system will give major user programs the capability to reduce their maintenance costs on a shared cost basis if an existing program discontinues their separate maintenance operations and makes use of the regular SSEL maintenance system. However, single program requests may not warrant centralized storage and maintenance expenses and would suggest separate maintenance on a cost-reimbursable basis.

## APPENDIX A

### SSEL SIC Scope

Major classification activity	1972 SIC major group
<b>Included Areas</b>	
Agriculture and agriculture services	01, 02, and 07
Forestry, fishing, hunting and trapping	08 and 09
Mining	10-14
Construction	15-17, and 6552
Manufacturing	20-39
Transportation	40-42 and 44-47
Postal services	43
Communications	48
Electric, gas and sanitary services	49
Wholesale trade	50 and 51
Retail trade	52-59
Finance and insurance <sup>1</sup>	60-64
Real estate and other finance	65 (except 6552)-67
Services, except private household <sup>2</sup>	70-86 and 89
Federal, State and local governments <sup>3</sup>	91-97
<b>Excluded Areas</b>	
Private household services	88

<sup>1</sup> Includes trust companies with employees (such as real estate trust) operating under trust company charter, but excludes individual investment trusts administered by banking organizations as reported on IRS Form 1041, U.S. Fiduciary Income Tax Returns.

<sup>2</sup> Large employers were contacted in the 1972 out-of-scope survey to verify classification and will be periodically contacted to insure accurate classification in the future.

<sup>3</sup> Government establishments will be included in the SSEL system as user requirements are identified.



## APPENDIX B

### Comparison of 1972 SIC and Census Bureau Codes to Other Agency Classification Codes for Selected Industries

1972 SIC TITLES	1972 SIC CODES (SIC manual and Census Bureau codes)			1972 SSA equivalent	Latest IRS 1065 and 1040C code	Latest IRS 1120 & 1120S code	1973 BLS publish- able code <sup>1</sup>
	Major group	Industry group	Industry				
BUILDING CONSTRUCTION—GENERAL CONTACTORS AND OPERATIVE BUILDERS	15						15
GENERAL BUILDING CONTRACTORS— RESIDENTIAL BUILDINGS		152					
General contractors—single-family houses			1521	1511	1510	1510	
General contractors—residential buildings other than single-family			1522	1511	1510	1510	
OPERATIVE BUILDERS		153					
Operative builders			1531	1531	1531	1531	
GENERAL BUILDING CONTRACTORS— NONRESIDENTIAL BUILDINGS		154					
General contractors—industrial buildings and warehouses			1541	1511	1510	1510	
General contractors, nonresidential buildings, other than industrial buildings and warehouses			1542	1511	1510	1510	
CONSTRUCTION OTHER THAN BUILDING CONSTRUCTION GENERAL CONTRACTORS	16						16
HIGHWAY AND STREET CONSTRUCTION, EXCEPT ELEVATED HIGHWAYS		161					161
Highway and street construction, except elevated highways			1611	1611	1611	1600	1611
HEAVY CONSTRUCTION, EXCEPT HIGHWAY AND STREET CONSTRUCTION		162					162
Bridge, tunnel, and elevated highway construction			1622	1621	1620	1600	
Water, sewer, pipe line, communication, and power line construction			1623	1621	1620	1600	
Heavy construction, not elsewhere classified			1629	1621	1620	1600	
BANKING	60						60
FEDERAL RESERVE BANKS		601					
Federal Reserve banks			6011		6000	6090	
COMMERCIAL AND STOCK SAVINGS BANKS		602					
State banks, members of the Federal Reserve System			6022	6021	6000	6090	



1972 SIC TITLES	1972 SIC CODES (SIC manual and Census Bureau codes)			1972 SSA equivalent	Latest IRS 1065 and 1040C code	Latest IRS 1120 & 1120S code	1973 BLS publish- able code <sup>1</sup>
	Major group	Industry group	Industry				
State Banks, not members of the Federal Reserve System, insured by the Federal Deposit Insurance Corporation			6023	6021	6000	6090	
State Banks, not members of the Federal Reserve System, not insured by the Federal Deposit Insurance Corporation			6024	6021	6000	6090	
National Banks, members of the Federal Reserve System			6025	6021	6000	6090	
National Banks, not members of the Federal Reserve System, insured by the Federal Deposit Insurance Corporation			6026	6021	6000	6090	

<sup>1</sup> Present publishable levels shown only, even though greater detail may be collected and assigned.



## WORKING PAPER 5

### Geographic Coding

Although useful in many situations, U.S.-level data do not necessarily reflect what is happening in Prince Georges County, or even the State of Maryland. More and more, data users are interested in statistics for small areas. For Federal statistical agencies to meet this demand, they must be able to separately identify and compile information for these smaller areas. To enable the Standard Statistical Establishment List (SSEL) to fully function as a basic file for Federal statistical agencies, it should have the capability to provide users with a comprehensive geographic data base.

The Bureau of the Census has developed a geographic coding system which identifies establishments to State, county, place, and within urbanized areas to census tract. Although this provides a finer geographic classification of data than 5-year economic censuses can effectively publish without the danger of disclosure, the system can be readily collapsed to the level of coding required by the SSEL. The code scheme utilized by this geographic coding system is basically compatible with that outlined in the Federal Information Processing Standards (FIPS) publications, at the county and standard metropolitan statistical area (SMSA) level. (See appendix, pp. 48-51.) The State, place, and tract codes represent Bureau of the Census convention at this time and are based generally on the 1970 decennial census code structure.

#### The Basic Units of the Geographic Code Structure

The code structure of the geographic coding system provides for—

Category	Number	Description
Divisions	9	
States	54	Includes District of Columbia and outlying areas (Puerto Rico, Guam, and Virgin Islands)
Counties	3,141	Includes Louisiana Parishes, Alaska Census Divisions; and independent cities in Georgia, Maryland, Missouri, Nevada, and Virginia
Places	Approximately 5,300 incorporated places contain 2,500 or more inhabitants and are recognized for the economic censuses. In addition, there are over 500 special economic urbanized areas and unincorporated places included as "places."	

Tracts	34,500
SMSA's	269

**Division and State.** In the Bureau's code structure, individual States and the District of Columbia are identified by two-digit numeric codes. The first digit identifies the geographic division as follows: (1) New England, (2) Middle Atlantic, (3) East North Central, (4) West North Central, (5) South Atlantic, (6) East South Central, (7) West South Central, (8) Mountain, (9) Pacific; the second digit, the State within the division in geographical sequence. (Thus, Maine is code 11; New Hampshire, 12; New York, 21; New Jersey, 22; etc.) In addition to the 50 States and the District of Columbia, the coding system includes a two-digit State code for Puerto Rico, the Virgin Islands, and Guam. Establishments located in these outlying areas will be regularly maintained as part of the SSEL. (NOTE: In the FIPS system, States are also identified by two-digit codes, but they are assigned in alphabetical rather than geographic order.) Interchangeability between the two systems is a relatively simple task.

**Counties.** Counties (which include Louisiana Parishes and census divisions in Alaska) are assigned three-digit numeric codes, alphabetically within each State, beginning with 001. For consistency, the independent cities in Georgia, Maryland, Missouri, Nevada and Virginia are treated as county equivalents, but are arrayed alphabetically following the counties and are assigned codes beginning with 510.

**Places.** The concept of "place" as presently contained in the geographic coding system is based on the 1972 economic census definitions which delineate five types of entities: (1) Incorporated places, (2) unincorporated places, (3) special economic urban areas (SEUA's), (4) remainders of counties, and (5) balance of SMSA's. These five types of places are defined as follows:

**Incorporated places.** These are political units incorporated as cities, boroughs, towns, and villages with the following exceptions: (a) Boroughs in Alaska, and (b) towns in the New England States, New York, and Wisconsin. Boroughs in Alaska are treated as county subdivisions and may include one or more incorporated places. The towns in the New England States, New York, and Wisconsin are minor civil divisions similar to the townships found in other States and

not necessarily thickly settled centers of population such as the cities, boroughs, towns, and villages in other States. Similarly, in New Jersey and Pennsylvania, where some townships possess powers and functions similar to those of incorporated places, the townships are not classified as incorporated places. Without this restriction all of the towns in the New England States, New York, and Wisconsin and the townships in New Jersey and Pennsylvania would have to be counted as incorporated places without any consideration of the nature of population settlement. The densely settled portions of some are recognized as unincorporated places or as part of an urbanized area.

In Hawaii, there are no incorporated places in the sense of a functioning local government unit. The State, however, recognizes places for statistical purposes and establishes boundaries for them. Consequently, all such places are treated as incorporated places.

Only incorporated places with a 1970 decennial census or special census count of 2,500 or more persons are recognized. This included new incorporations if the 1970 population in the area included in the new incorporation was 2,500 or more; and, similarly, mergers, consolidations, etc., of two or more places if the combined 1970 population in the area of the affected places was 2,500 or more. Excluded are places which disincorporated prior to December 31, 1972.

*Unincorporated places.* In the 1970 census, the Census Bureau delineated boundaries for closely settled population centers without corporate limits. Each place so delineated possessed a definite nucleus of residences and its boundaries were drawn to include, if feasible, all the surrounding closely settled area. Outside urbanized areas, unincorporated places were delineated for settled areas with a population of 1,000 or more; within urbanized areas, only if they had 5,000 inhabitants or more and there was an expression of local interest in their recognition.

For the economic censuses, only unincorporated places of 25,000 or more for which the Bureau also has computerized address coding guide coverage<sup>1</sup> are recognized.

*Special Economic Urban Areas (SEUA's).* These are townships in New Jersey and Pennsylvania, towns in the six New England States with a 1970 census population of 10,000 or more inhabitants, and other New England towns if the census-defined 1970 urban population was 2,500 or more.

*Remainder of county.* This is the residual area of a county that is not recognized as a unique entity under the definitions described above for incorporated places, unincorporated places, or special economic urban areas.

*Balance of SMSA.* These are designated only in the New England States because SMSA's are defined in terms of towns rather than counties. To maintain the ability to tabulate data

to SMSA's, the residual areas within SMSA's are grouped as "balance of SMSA" rather than "balance of county."

The place code conforms to the structure used in the 1970 decennial census except for remainder of county and balance of SMSA. (See p. 48 for a detailed discussion.)

In counties where no communities were recognized as places for the economic censuses, the entire county is defined as "remainder of county" and assigned a pseudo-place code of 9990. Conversely for independent cities and places coextensive with the county, the entire county is also coded as a single place.

In addition to these relationships there exists a common situation in which an incorporated place is located in more than one county and a place code can, therefore, be associated with more than one county. (In these situations, each county or place part is separately identified.) It is impossible, however, for a place to cross State boundaries since incorporation charters are issued by States.

**Tracts.** The 34,500 census tracts<sup>2</sup> are defined as areas composed of about 4,000 residents with similar economic status. They are designed to provide more detailed information about densely populated urban areas and, therefore, are located almost entirely within standard metropolitan statistical areas. As of the 1970 population census, all SMSA's had been tracted. Tract boundaries are determined by local area committees, subject to the approval of the Bureau of the Census.

**SMSA's.** The 267 standard metropolitan statistical areas (SMSA's) identified in the economic censuses represent areas defined by OMB. In general, an SMSA consists of one or more entire counties (towns in New England) contiguous to or containing one city of at least 50,000 inhabitants, or an economic or social integrated community of at least 50,000 inhabitants.<sup>3</sup> SMSA's are presently identified in the geographic coding system alphabetically by name of SMSA with three-digit numeric codes generally conforming to the FIPS structure (the rightmost digit, normally a zero, has not been included). However the continuing establishment of new SMSA's makes continued use of the three digits unsatisfactory and we plan on carrying the full four-digit FIPS representation in the future.

## Special Purpose Codes

Along with the general geographic delineation classifications, some statistical programs require special purpose geographic categories to define unique areas of user interest. Some of

<sup>1</sup> Ability to assign geographic codes based on a street name and address.

<sup>2</sup> At the present time, the coding system provides the necessary reference file coverage for coding to approximately 70 percent of these tracts.

<sup>3</sup> For a complete description of the criteria used for designating SMSA's, see Federal Information Processing Standards (FIPS) Publication 8-3.



these codes may have limited application to the establishments of the SSEL as a whole, but they are used fairly widely in publishing statistics about the industries to which they relate.

Although the following list is not complete, it does provide an indication of the kinds of special purpose geographic classifications in use by various statistical groups.

Geographic designation	No.	Definition
Central business districts (CBD)	131	The downtown shopping areas of cities with 100,000 or more population, used in retail statistics
Major retail centers (MRC)	2300	Concentration of retail stores (large shopping centers, etc.) located within SMSA's, but outside the CBD
Oil and gas districts	17	Groups of counties in the main oil and gas exploration States (California, Louisiana, Texas, and New Mexico)
Water use districts	20	As defined by an interagency committee based on water use by manufacturers.
Production areas	25	Clusters of SMSA's representing large, geographically compact, areas of industrial activity.

These special purpose codes are currently in use by selected programs and the proposed geographic system has the capability to provide the additional designations. However, at this time, the SSEL does not propose to maintain them on a regular basis until additional user requirements are known that will justify the added cost.

To some extent the SSEL may also provide customized geographic classifications as long as they represent combinations of geographic units presently available in the geographic coding system<sup>4</sup> and data can be provided without violating confidentiality. It is proposed at this time that this type of custom operation be done under contractual agreement between the user program and the SSEL. If done in conjunction with a regularly scheduled update or correction operation, user cost for developing custom geocodes would probably be modest. However, if wide user interest can be established for a specific set of custom codes, consideration will be given to maintaining and updating them in the SSEL as a part of the regular census program.

## The System and How It Works

The geographic coding system, though operationally separate, will function as an integral part of the SSEL. The system is

essentially automated, but is augmented by manual coding in order to handle cases that are indeterminate or ambiguous to the computer system.

The computerized phase focuses upon a comprehensive address reference file (ARF) which provides the basis for linking individual addresses to the full array of geographic codes applicable to an area.

The ARF consists of two levels of address reference records. These include "header" records containing census place and post office names with corresponding five-digit ZIP code coverage for the entire United States. Including common misspellings and variant names, there are approximately 130,000 entities. In addition, the file contains 3.1 million detailed records which include street names (including some variants), and address ranges, plus large building name coverage, essentially for most places with at least 2,500 inhabitants. A series of computer programs identify and disseminate the various components of an incoming address (i.e., street name, house number, direction, post office name, and ZIP code, etc.). The standardized address components are matched against the ARF, which has been similarly standardized, to select the best matching reference file record. (See fig. 1, p. 44.) This is accomplished by computing algebraically a "point" score based on positive points assigned to each matched address component and negative points to each mismatch. If a singularly high point score is obtained or a unique match is made, the geographic code set associated with the reference file record is assigned to the individual address.<sup>5</sup>

In the 1972 economic census, 99 percent of the 5.5 million addresses processed had sufficient information to enable matching at least the post office and ZIP code level. Addresses matched at this level are coded to State, county, and place.

For areas where detail street and building name coverage existed and the incoming address contained adequate address information, the system was able to match and code approximately 70 percent. Matching at the detail level not only provides the capability for coding to a census tract, but also provides a more definitive code assignment at the place level (as evidenced by preliminary evaluations of the 1972 economic census geographic coding results), since the use of the post office name and ZIP codes alone in matching, represents at best, an approximation of a political jurisdiction. For improved coding quality, significant size establishments which have been computer coded based only on post office name and ZIP code (and the respondent's information regarding the physical location of the establishment is also ambiguous), will be clerically researched for verification.

<sup>4</sup> Excluding MRC's which are not directly derivable from the census geocoding system.

<sup>5</sup> A flag is assigned to each matched case, along with the geocodes designating the level of matching achieved. See appendix for description of flags.

FIGURE 1

## INPUT ADDRESS

235 SOUTH WALNUT LANE  
PHILADELPHIA, PA. 19149

## ADDRESS ELEMENTS

### SUBSEQUENT TO:

1. Confirmation of ZIP code to post office and State names.
2. Identification and standardization of address components.

Standardized address elements compared to relevant section of ARF to select best matching reference file record.

Results in geographic code assignment:

**STATE 23** (Pennsylvania)  
**COUNTY 091** (Montgomery)  
**PLACE 1800** (Cheltenham)  
**TRACT 010201** TWP)

ZIP CODE		HOUSE NO.		STREET NAME		STREET TYPE		DIRECTION		GEOGRAPHIC CODES			
19149		235		Walnut		LA		S					
ZIP CODE	Low	High	NAME	TYPE	DIRECTION	STATE	COUNTY	PLACE	TRACT				
19149	2	98	Walnut	AV	S	23	101	7180	010000				
19149	1	99	Walnut	AV	S	23	101	7180	010000				
19149	100	199	Walnut	LA	S	23	101	7180	010100				
19149	201	299	Walnut	AV	S	23	091	1800	010204				
19149	201	299	Walnut	LA	S	23	091	1800	010201				
19149	215	299	Walnut	ST		23	091	2180	000000				
19149	229	315	Walnut	LA	N	23	101	7180	010202				

## Clerical Coding

A derivative of the "header" portion of the address reference file (in hard copy form) is used for the clerical assignment of codes to the State, county, and place level. This reference tool containing the names of all places, pseudo-places, alternate names for places and pseudo-places, plus county balance (post office) names is used to assign codes for places that the computer system is unable to decipher, but where the location is clerically discernible from the address. In addition, the following reference materials are generally used for clerical resolutions, particularly where addresses are unrecognizable and research must be based on establishment name.

1. National ZIP Code Directory
2. Rand McNally Commercial Atlas
3. Local telephone directories
4. Various maps and city directories

Certain types of addresses are uncodable by either the computer or manual coding, because they are completely unrecognizable or because there is no relationship to their actual physical location. These include post office boxes, "IN CARE OF," etc. In these instances, communication with the company is required in order to assign a definitive geographic code. The methods of communication are covered later in this discussion.

## Maintenance of the Geographic Coding System Reference Files

The geographic coding system reference materials, reflecting for the most part geographic boundaries and definitions, are

updated at least every 5 years. Changes to place boundaries are identified and collected from the Annual Boundary Annexation Survey. Changes in place size are identified from special censuses and other special programs. Historically, however, changes collected from these various sources have been stock-piled and the reference file (ARF) used by the computer system has been updated only at the time of an economic census. The types of changes that require adjustments to the reference file include—

1. Creation of new places and, on very rare occasions, new counties
2. Changes to boundaries of existing places because of annexations or detachments and to newly included street patterns identified in GBF and LAFR/SARF<sup>6</sup> operations
3. Addition or deletion of places to the coding structure as a result of population change (identified by the decennial or special censuses) to over or under the 2,500 inhabitants recognized as a minimum for inclusion in the economic census
4. SMSA additions and changes to the structure and definitions of existing SMSA's
5. The identification of commonly used variant names and common misspellings

<sup>6</sup> A Bureau program (to be implemented in 1976) designed to update the boundaries of all incorporated (with the exception of six unincorporated) places with 2,500 or more inhabitants that are not covered by the address coding guides provided for the 1970 census.



While the geographic coding requirements of the SSEL, especially as they relate to the **City and County Business Patterns** (CCBP) tabulations, dictate the need for more frequent updating of the ARF, preferably on an annual basis; it is infeasible at this time to consider changes to boundaries of existing places on an annual basis.

For areas that obtain new status as "places" because of changes in size or by achieving corporate status, for which the current reference file coverage consists of the place or place post office level only, a simple numbering change is necessary in which the place code is assigned reflecting the alphabetic position of the entity.

And the procedure for implementing changes to the SMSA definition or structure is uncomplicated in the present system, because SMSA codes are assigned from a supplemental reference file by linking either county (or towns in New England) to their respective SMSA codes. Therefore, the necessary changes to the SMSA composition are made to the much smaller supplemental reference file only.

But for changes in place status or boundaries due to annexations which require inclusion of areas containing street detail coverage, the process of the operation is much more complex and requires the availability of adjusted address ranges which conform to the new boundaries. This capability, tied to the annual maintenance of geographic base files (descendants of the address coding guides), will not be available before 1980.

Future uses of the SSEL's geographic data will require current maintenance of smaller geographic unit, including changes in tract boundaries.

### Initial Geographic Coding Status of SSEL

Initially the SSEL will contain geographic codes based on the final disposition of 1972 economic census results, augmented to include address changes and new entities identified by the 1972 Out-of-Scope and 1973 Company Organization Surveys. Subsequently, new address entities (births and address changes) for employer cases will be processed through the coding system at designated intervals consistent with the maintenance of the SSEL, and the geographic codes updated. This will include address changes and additions from census source surveys and the IRS BMF entity change file for records not part of a census mailing operation.

Zero-employee cases are not considered an integral part of the SSEL and will not be processed on a regular basis.

### Level of Code Assignment

Provided sufficient address information and appropriate reference file coverage is available, the computerized phase of the geographic coding system has the capability of assigning a full array of codes down to the tract level. However, the clerical supplementation phase (which has much higher per unit coding cost than the computer) becomes increasingly more expensive when coding to the county, place, or tract level.

Proposed requirements for the initial years' geographic coding of the SSEL dictate the need to code to the place level only cities of at least 100,000 inhabitants and to the county or county equivalent level everywhere else. (The one exception is the need to code to the town in New England in conjunction with developing SMSA tabulations.) Therefore, the full geographic coding process (including clerical coding) will be applied only to the tabulation level required. We will supply a cost appraisal to any user who requires geographic identifiers below this level (particularly users of customized codes).

### Frequency of Processing

In the computerized phase, as previously stated, some addresses fail to code or are considered coded with a low degree of confidence (cases coding to post office name and ZIP code only in areas containing street coverage are considered in this category). The relative size of the establishment will determine the extent of effort for clerically assigning a precise code to these types of coding problems.

Address changes and births are processed through the coding system on a quarterly basis, roughly paralleling the annual update of the SSEL. This will tend to even out the clerical work load and minimize the impact of the problem cases still requiring resolution just prior to inclusion in the CCBP tabulations.

In addition, an experienced clerical team could be maintained on a year-round basis, avoiding the extensive staff augmentation and retraining often required for peak periods.

### The Effect of Changes in Area Definitions

Maintenance of the geographic codes in the SSEL will primarily entail coding new and changed address entities.

However, periodically, previously coded establishments will be subject to recoding, not because of changes to their location address; but because of changes in area definition. This will be particularly true if and when we develop more frequent updating of the coding system reference files.

It will be necessary at some point, prior to use in the **City and County Business Patterns**, to adjust the geographic codes of establishments located in affected published areas. Geographic code changes based on changes in definition will be identified for analyzing area tabulation differences.

Any changes to existing geographic codes can be provided to any user agency based on known program requirements.

### Inclusion of New Establishments

The new establishments (births) that are computer coded at regular intervals and added to the SSEL would also be forwarded to user agencies based on program needs. Addresses which are uncodable (P.O. boxes, etc.) and require company inquiries would be handled as described below in the section on problem addresses. Of course, if any of these cases have

other problems (such as SIC or size code), then they will be mailed standardized correspondence requesting physical location as well as classification. If the only problem that exists is geocoding, then it will be processed through either the Annual Company Organization Survey or the refile update program. (See "Potential Geocode Problems," below.) Returns would be used to maintain the latest locations for establishments not in a current survey. Those establishments which are in a current survey will have updated addresses since any notification of address changes received on a flow basis will be automatically carried to the SSEL record.

### Individual Address Changes

Geocode changes to the individual records of the SSEL that result from such things as address changes (reflecting a physical move) would be made within the quarterly processing period as notification is received from the respondent on a current survey or the Annual Company Organization Survey. In accordance with the present practice where the movement of the establishment is from one tabulation area to another, it is treated as a new establishment with the former location designated as an establishment delete. If the address change occurs from something such as renumbering streets, etc., or an establishment moves within a "place" the address will simply be corrected. As with other SSEL corrections and additions, these revisions can be made available to a user agency based on known program requirements.

### Potential Geocode Problems

In dealing with all the updates and corrections to the SSEL, three major groups of problems dealing with address changes arise: (1) Resolution of uncodable addresses which require a company inquiry, (2) changes in location of significant size establishments causing conflicts with existing geographic codes, and (3) respondents' reporting of mailing address (instead of physical location). All of these situations will be resolved through techniques which keep contact with the company to a minimum.

In resolving the uncoded cases, those establishments which are normally included in the Annual Survey of Company Organization and are not extremely large would be flagged as address problem cases. As a part of survey processing, these cases will be reviewed to make sure these addresses have been corrected and are complete and codable. If they have not, the companies will be contacted to correct the specific problem areas. Correspondence would include questions concerning any other problem areas that exist. This procedure would also be used for those establishments which are part of the

rotational mailing (the part of the SSEL which is updated on a rotating basis rather than annually). Those establishments which are part of the rotational refile mailing program and would normally be updated in a future year, instead, would be identified by a specific flag in the record as address problems and become part of the current year's refile system. Few situations exist where establishments would be contacted, as a result of an address change, outside of annual or rotational update. Establishments which might be contacted at the time of the change rather than waiting for the annual update fall into two main groups: very small establishments (included in current surveys) which might not be included in the rotational mailing and especially large establishments whose movements would have significant impact on geographic data in a current survey. The very small establishments would be contacted through a classification card in the refile system which contains a physical location question. Since contact with the company would have been made already, the classification card would be used to ask questions about any other problem areas that exist, such as size codes or SIC.

Extremely large establishments (over 500 or more employees) changing their address from one place or county designation to another will be contacted immediately to verify that the reported change is valid. This will be done since it is possible that either the original address was in error or the transfer involved a sale of one plant and buying of another. The exception to this procedure would be changes occurring to a large establishment in the last quarter of the year, in which case, these establishments would be included in the Annual Company Organization Survey mailouts.

### Standardization of Physical Location Questions

A physical location question is frequently included on the survey forms to help determine the exact location and legal jurisdiction in which an establishment conducts business.

When physical location is requested in the processing of a users survey, it should be asked in a standardized manner. (See figure 2 for example of 1977 economic census technique.) We are presently investigating techniques for improving the quality of response to the physical location question. The general use of this type of standardized question will help to insure that all address changes or corrections will be reported by respondents in the same fashion. It can also be adapted for multiestablishment report forms, by including a statement concerning physical location in the instructions of the individual report form and then listing the establishments so that addresses could be checked and corrected. An example of a multiestablishment format is shown in figure 3. Primary emphasis is placed on the physical location rather than the mailing address. If establishments are prelisted in this fashion on all SSEL user report forms, it will help insure consistency in the geographic coding of the SSEL.



FIGURE 2

<b>Item 1 - PHYSICAL LOCATION OF ESTABLISHMENT</b> - In order to assign this establishment to the correct geographic area, the Bureau of the Census must know the actual location which may differ from the mailing address. Complete Items a through g.			
<b>a. Address number and street name of physical location</b> - If not known, enter building name, shopping center name, or other physical location description. Do not enter P.O. box or rural route. Mark (X) for a, b, c, and d if same as mailing label; if different show corrections. Same as mailing label <input type="checkbox"/> OR ►		<b>e. Type of municipality indicated in 1b</b> 1 <input type="checkbox"/> City      4 <input type="checkbox"/> Borough      7 <input type="checkbox"/> Other - Specify _____ 2 <input type="checkbox"/> Town      5 <input type="checkbox"/> Township Mark (X) one    3 <input type="checkbox"/> Village      6 <input type="checkbox"/> Unincorporated    8 <input type="checkbox"/> Don't know	
<b>b. Name of city, town, village, borough, etc. of physical location</b> Same as mailing label <input type="checkbox"/> OR ►		<b>f. Is this establishment located inside the legal boundaries of the city, town, village, etc., indicated in 1b?</b> 1 <input type="checkbox"/> Yes 2 <input type="checkbox"/> No NOTE - The area served by a post office generally does not coincide with the legal boundaries of the municipality from which the post office takes its name. 3 <input type="checkbox"/> No legal boundaries 4 <input type="checkbox"/> Don't know	
<b>c. State</b> Same as mailing label <input type="checkbox"/> OR ►	<b>d. ZIP code</b> Same as mailing label <input type="checkbox"/> OR ►	<b>g. Name of county (Louisiana parish) of physical location</b>	

FIGURE 3

EMPLOYER ID NO.		MAJOR ACTIVITY	
NAME			
			STORE OR PLANT NO.
NUMBER AND STREET OF PHYSICAL LOCATION			
CITY	STATE	ZIP	

## APPENDIX

### Description of Codes and Flags Assigned by the Geographic Coding System

#### 1. State Codes

The State code is a two-digit census-assigned numeric code and is identical to that used in the 1967 economic censuses. The first digit indicates the geographic division (1-9) within the United States; the second digit, the State within the geographic division.

#### 2. Standard Metropolitan Statistical Area (SMSA) Codes

- a. The SMSA code is a three-digit numeric code representing the SMSA's in alphabetical sequence within the United States. Included are the changes in SMSA definitions, retitlements and the new SMSA's designated by the Office of Management and Budget in their memorandums of February 22 and November 4, 1971, January 7 and November 10, 1972, April 27, August 15, and November 30, 1973, and February 8 and April 5, 1974.

For the economic censuses, the SMSA codes used by the Bureau include only the first three digits of the four-digit Federal Information Processing Standards Publication (FIPS) codes. Please note that a code of 749 has been assigned to the Santa Cruz, Calif., SMSA (FIPS 7485), to avoid duplication with the code for the Santa Barbara-Santa Maria-Lompoc, Calif., SMSA (FIPS 7480), and a code of 382 to the Kingsport-Bristol, Tenn.-Va., SMSA (FIPS 3815) to avoid duplication with the code for the Killeen-Temple, Texas, SMSA (FIPS 3810).

A code of 000 designates a non-SMSA area.

- b. Each SMSA is assigned a numeric size code based on the 1970 decennial census population of the SMSA as shown below. Size codes for new SMSA's and for SMSA's which were redefined since 1970 have been assigned based on their 1970 population.

Population range	SMSA size code
Under 250,000	1
250,000-499,999	2
500,000-999,999	3
1,000,000 and over	4

#### 3. County and County Equivalent Codes

- a. The county code corresponds to the three-digit numeric FIPS system used in the 1970 decennial census.

The FIPS system reflects the alphabetic sequence of counties (excluding independent cities and other county equivalents) within a State. The codes are assigned uniquely within each State, starting with 001 (except for

South Dakota which begins with 003) and are generally gapped by 2; for example: 001, 003, 005, 007, etc.

- b. County equivalent codes are used in Alaska, where no counties exist, for the 29 census divisions serving as county equivalents. The codes are assigned in intervals of 10, beginning with 010; i.e., 010, 020, 030, etc.

Independent cities are independent of any county organization and are considered county equivalents in the presentation of census data. Codes for the independent cities in Virginia and for the independent cities of Columbus, Ga.; Baltimore, Md.; St. Louis, Mo.; and Carson City, Nev., are assigned as a separate series, starting with code 510 and generally gapped by 10; i.e., 510, 520, 530, etc.

#### 4. Place Code

- a. The place is the four-digit numeric code used in the 1970 decennial census. It reflects an alphabetic sequence of place names (including independent cities) within a State. The codes are assigned in intervals of 5 beginning with 0005; for example: 0005, 0010, 0015, etc. Qualifying new incorporations (those with a 1970 census equivalent population of 2,500 or more) through December 1972, qualifying 1970 census-defined unincorporated places,<sup>1</sup> and the special economic urban areas (SEUA's)<sup>2</sup> have also been assigned four-digit place codes alphabetically within this system.

All incorporated places of less than 2,500 population, as well as nonqualifying unincorporated places, the New England towns and New Jersey and Pennsylvania townships not qualifying as SEUA's, and the balance of each county not being recognized as a unique entity (i.e. area are not located in any "place") are categorized

<sup>1</sup> Unincorporated places are delineated boundaries for closely settled population centers without corporate limits as defined by the Bureau of the Census. Each place so delineated possesses a definite nucleus of residences and has its boundaries drawn to include, if feasible, all the surrounding closely settled area. Outside urbanized areas, unincorporated places were delineated for settled areas with populations of 1,000 or more; within urbanized areas, only if they had 5,000 inhabitants or more and there was an expression of local interest in their recognition.

For the economic censuses, only unincorporated places of 25,000 or more inhabitants for which the Bureau also has computerized address coding guide coverage (ability to assign geographic codes based on a street name and address number) are recognized.

<sup>2</sup> Special economic urban areas are townships in New Jersey and Pennsylvania and towns in the six New England States with a 1970 census population of 10,000 or more inhabitants and other New England towns if the 1970 urban population was 2,500 or more.

into a "balance of county" group and are assigned a place code of 9990.

In New England (where SMSA's are defined in terms of towns rather than counties) to maintain in the ability to tabulate data to SMSA's, places of less than 2,500 population, the nonqualifying unincorporated places, and the towns not qualifying as SEUA's (residual areas) within SMSA's are categorized into "balance of SMSA" groups instead of "balance of county" groups. The "place" code for these "balances" is a "9" followed by the appropriate three-digit SMSA code.

- b. The place size code is a one-digit numeric code based on the 1970 decennial census population counts adjusted by the PC(1)-A correction notes and special census enumerations through calendar 1972. These size code groupings, which are identical to those used in 1967, are:

Population Range	Size code
2,500-4,999	2
5,000-9,999	3
10,000-24,999	4
25,000-49,999	5
50,000-99,999	6
100,000-249,999	7
250,000-499,999	8
500,000 and over	9

- c. The place description code is a one-digit numeric code describing the geographic importance of a place in terms of coding, tabulation, and publication for the 1972 economic censuses. The codes and their definitions are as follows:

- 1 = Place is incorporated and is a central city of an SMSA.
- 2 = Place is incorporated and is a central city of an urbanized area (UA).
- 3 = Place is incorporated and is both a central city of an SMSA and UA.
- 4 = Place is incorporated and has a population of 2,500 or more.
- 5 = Place is a census-defined unincorporated place and has a population of 25,000 or more.
- 6 = Place is a special economic urban area (SEUA: selected New Jersey and Pennsylvania townships and New England towns) which does not contain a place being recognized for separate tabulation in the economic censuses.
- 7 = Place is an SEUA but contains one or more places being recognized for separate tabulation in the economic censuses.
- 8 = A New England town not recognized as an SEUA but located in an SMSA.
- 9 = Place (or New England town) not categorized in any of the categories 1 through 8 above.

## 5. Census Tract Code

A six-digit numeric identification of the census tract as defined for the 1970 census. The first four digits identify the basic tract number; the final two digits contain zeros (0), except where the original tract has been split into two or more parts. In instances where the tract has been split, the final two digits contain numeric identifiers beginning with 01, and continuing with 02, 03, etc., until all portions of the original tract are uniquely identified.

NOTE: In items 6-10, when the condition is not present the indicator position contains a blank.

## 6. Central Business District Indicator

The CBD indicator is a one-digit designation ("C") that indicates the assigned tract code is part of a central business district or downtown business area.

- a. Central business districts (CBD's) were defined by the Census Bureau in consultation with local census tract committees for SMSA cities of 100,000 or more persons. A CBD is defined as an area of very high land valuation characterized by a high concentration of retail businesses, offices, theaters, hotels, and service businesses; an area of high traffic flow; and defined to follow existing tract lines; i.e., to consist of one or more whole census tracts.
- b. Downtown business areas (DBA's) are specialized major retail centers in a major SMSA city of less than 100,000 population and are defined in the same manner as a CBD; i.e., one or more whole census tracts.

## 7. SMSA Crossover Indicator

A one-digit designation ("X") is in each of the components of all SMSA's that are contained in two or more States.

## 8. Coextensive County-SMSA Indicator

A one-digit designation ("S") for one-county SMSA's.

## 9. Coextensive County-City Indicator

A one-digit designation ("C") for cities that are coextensive with their county (i.e., Philadelphia County—City).

## 10. Standard Consolidated Area Indicator

A one-digit code (A-New York, B-Chicago) designating the contiguous SMSA's that comprise the New York, N.Y.-Northeastern New Jersey and the Chicago, Ill.-Northwestern Indiana Standard Consolidated Areas respectively.



## 11. Flags associated with the assigned geographic codes

- a. The M (manual coding) flag position not only identifies whether the geocodes were computer or manually assigned, but also indicates whether the manual codes were predicated on direct telephone contact with the establishment or on additional information other than the original mailing address or physical location associated with a census survey. The symbols and definitions used are as follows:

Blank - Geocodes were computer assigned.

M - Geocodes were manually assigned, based on clerical research of reference source materials.

K - Geocodes were manually assigned, based on information obtained from classification card mailout.

T - Geocodes were manually assigned, based on information obtained from direct telephone contact with the establishment.

- b. The place confidence flag indicates the confidence of the computer-assigned codes; i.e. whether the case was coded based on street name and address (and if so, whether with a low or high point score) or whether the case was coded based on place/post office name and/or ZIP code. Cases coded with point scores (which means that the computer was able to match, at least in part, the incoming address against the reference file), based on various sample analyses, are almost always correct. A distinction between high (3 or more points) and low (1 or 2 points) point scores was established to aid the computer system in the determination of the best possible geocode. A low point score signifies that all of the incoming address elements, either because of reference file or incoming address deficiency, could not be successfully matched against the reference files. The symbols and their definitions are—

A - Case coded to "high point scores" (matched on street name and address with 3 or more points) or to "high unique street" (matched on both street name and address for streets unique to place within 3-digit ZIP code).

B - Case coded to "low point scores" (matched on street name and address with a point score of 1 or 2) or to "low unique street" (matched on only street name and 5-digit ZIP code for streets unique to place with 3-digit ZIP code).

D - Case coded based on match to "unique ZIP" (matched list of 5-digit ZIP codes determined, based on map review, to be unique to a place).

E - Case coded based on "header match" (matched the City Reference File,<sup>3</sup> which is a listing of

possible place/post office names and their ZIP codes, on both place/post office name and ZIP code) in an area without detail coverage (areas for which the Bureau does not have street name and address range records).

F - Case coded based on "header match" in an area where detail (street address) coverage exists and the match may or may not have been confirmed by the respondents in/out-county alpha, if available. (See note under E, above.)

H - Case coded based on "header match" of 5-digit ZIP code only and geocodes assigned were those associated with the place/post office name obtained in the precycle coding operations which confirmed ZIP/post office relationships on the incoming address and corrected impossible relationships. (These will be cases with a "P" in the "ZIP-PO" flag position described below:

# - Case was force coded (imputed).

∅ - Case is not in the United States or was manually coded. (See "M" flag position.)

- c. The ZIP-PO flag position identifies the results of a precycle geocoding operation used to confirm the place/post office name and 5-digit ZIP code on the incoming address prior to entering the coding system. The incoming address is matched against the City Reference File (CRF) where impossible ZIP/post office incoming address relationships were detected and corrected, if possible. The ZIP-PO flag does not determine how the case finally coded (that is described by the place confidence flag field). It indicates only the actions taken to make the case acceptable as input to the coding cycle. The ZIP-PO symbols and their meanings are—

∅ - The 5-digit ZIP code and place/post office name for the case was confirmed by the CRF in the precycle operation.

M - The case is a statewide mineral industries case (ZIP=99999, or SIC=10-14) and the case is to be bypassed in the coding system.

F - The 5-digit ZIP code matched the CRF, but the place/post office name did not, and a new place/post office name could not be assigned by the systems precycle edit due to conflicting place/post office names on the CRF or to conflicting State name and ZIP code on the incoming address. (This flag is rare in that most cases

<sup>3</sup>In essence, the City Reference File is a self-contained file of the ARF "header" records.

will have been assigned updated information in the precycle and the F flag will have been replaced by an R, W, or P, as described below.) True F cases are either researched or force coded.

- N - The place/post office name matched the CRF, but the 5-digit ZIP code did not and a new ZIP code could not be assigned from the CRF in the precycle edit. (This flag also is rare. In most instances, the ZIP code will have been replaced in the precycle operation and the N flag replaced by the R or W flag.) True N flag cases are either researched or force coded.
  - U - The 3-digit ZIP code matched the CRF, but the place/post office name did not match and the case could not be assigned updated information in the precycle edit. (This flag is rare in that most cases will have had information replaced in the precycle and the U flag replaced with the R or W flags.) True U flag cases are either researched or force coded.
  - Z - Both the place/post office name and 3-digit ZIP code did not match the CRF in the recyle; the case is either researched or force coded.
  - R - The last two digits of the ZIP code was assigned from the CRF during the precycle operation.
  - W - The 5-digit ZIP code was assigned from the CRF during the precycle operation using place/post office name and State code to obtain the ZIP code.
  - P - The place/post office name was assigned from the CRF during a recycle operation using 5-digit ZIP code and State code to obtain the place/post office name. These cases equate to those with an H in the place confidence flag position.
- d. The CBD confidence flag will appear for all cases regardless of whether the case is a retail establishment. The flag indicates the confidence level attached to the CBD code (or non-CBD code) that was assigned the case. The flags are—
- A - The assigned CBD (or non-CBD) code was coded with confidence; i.e., it coded to low or high street detail, to low or high unique street, or to unique ZIP. *By definition all nonretail cases are assigned the A flag.* For retail cases which coded to a post office header and the post office is not associated with a CBD place, the A flag also was assigned.
  - D - The CBD code was assigned based on a distribution of the frequency of CBD/non-CBD assignments for the particular ZIP code concerned, as obtained from the number of occurrences of detailed coded cases in the previous coding cycle for the ZIP code post office name. By definition only retail cases could be assigned a D flag.
- e. A flag indicates that two or more reference records, at either the detail or header level, (containing different geocodes) matched the incoming address equally as well. The flags are—
- T - The incoming address matched two or more detail reference records equally as well. (The geocodes were assigned from the header record level.)
  - H - The incoming address matched ZIP code and post office only and two or more header records. The tie was resolved by utilizing additional information furnished by the respondent (e.g., county of physical location, in or out of legal boundaries of city, etc.).
  - I - The incoming address matched ZIP and post office only, two or more header records, and no additional information was provided. The tie was resolved by imputation utilizing a frequency distribution of ZIP and geographic code relationships. (This distribution, based on tabulation of previously coded cases provides the probability of coding to each geographic area served by a ZIP code.)





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## WORKING PAPER 6

# SSEL Maintenance and Update System

### INTRODUCTION

A major problem throughout the Federal statistical community is that corrections and updates to individual agency name and address lists are separate, independent operations based on the agency program needs. This results in duplicate maintenance efforts and costs for the same general purpose information, including a lack of comparability in some statistical series purporting to cover the same universe.

Some major objectives of the Standard Statistical Establishment List (SSEL) maintenance and update system would include—

1. Maintain up-to-date the name and address list of establishments and their parent companies for multiple agency or program use in conducting statistical surveys on a quinquennial, annual, quarterly or monthly basis.
2. Reduce duplicate file maintenance and related costs by implementing and coordinating one file maintenance system. Complete implementation would include linking of participating program or agency identification numbering systems to the SSEL system, access to all approved users and coordinating and disseminating approved additions or corrections among users.
3. Improve quality of Federal statistics through joint use of one universe file by providing a single source for the determination and assignment of the industrial classification of establishments engaged in economic activity and by providing a common frame for use in selecting statistical samples.

Working paper 6 will describe in detail the proposed method for updating the SSEL file including items to be updated, current and future agencies or programs supplying potential changes, schedule of availability from supplier, criteria and edits for accepting proposed changes, and availability of corrections to current and potential users.

### CURRENT STATUS OF THE SSEL

The organizational units to be identified in the SSEL are enterprise, legal entity for multiestablishment firms (employer identification (EI) number), establishment, and reporting unit.

Table 1, (p. 57), indicates the classification codes, size codes, and geographic codes currently available by organizational level and program sources used as input.

### CURRENT AND FUTURE SSEL CORRECTION SOURCES

Corrections and changes to establishments of the SSEL currently originate from the Bureau of the Census, Social Security Administration, and Internal Revenue Service programs. Listed in table 2 (p. 57) are the current statistical programs to be used for updating the SSEL, their frequency of source, number of respondents, organizational units, industries covered, and major items updated. (See app. A, p. 59, for a detailed list of individual items updated by each program.)

In addition to the above programs, the SSEL staff proposes to explore the use of other sources of information as future inputs. Those statistical agencies with major responsibilities for collecting current economic data from broad segments of the business universe (e.g., Bureau of Labor Statistics and the Statistical Reporting Service of the Department of Agriculture), as well as those agencies of the Department of Health, Education and Welfare covering specific segments of the services sector of the economy will be likely sources. This coordination of statistical information will enable user programs to obtain the latest changes without having to request the identical information from respondents through additions to their individual programs.

### CURRENT SSEL CORRECTION TYPES

The following types of corrections are currently maintained and updated by the SSEL.

#### Organizational Structure (including name/address changes)

The organizational structure of the enterprise, legal entity for multiestablishment firms (EI number) and their affiliated establishments are updated annually based on results of the Company Organization Survey and user programs which cover partial or complete establishment operations such as the Annual Survey of Manufactures, current surveys, classification card surveys, etc.

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## Size Codes

Size codes are updated annually for multiunit companies and their affiliated establishments from data reported on the Company Organization Survey report form. Data for single-unit companies and nonmail or nonresponse cases in the Company Organization Survey are obtained annually from various user programs, including administrative records. Reported data used to derive initial size codes and subsequent updates include first-quarter employment, first-quarter payroll and annual payroll. In addition, the SSEL system has the capability to collect in the Company Organization Survey values for sales/receipts data. As soon as the appropriate funding becomes available for obtaining sales/receipts from administrative records, the SSEL will incorporate into the file size codes representative of sales/receipts. When feasible, values for inventories and a possible fifth variable indicator will be represented by size-class indicators. However, the fifth variable indicator will be limited to those data items which are available from administrative records.

## Industrial Classification Codes

Given the necessary funding, the SSEL has the capability to update the classification of the enterprise and the legal entity for multiestablishment firms annually if user programs require it. Presently, enterprise codes are updated quinquennially in conjunction with each economic census. (For updating the enterprise classification, see working paper 4 for the "filter-up" or "filter-down" methods based on establishment payroll.) Establishment classification codes are updated periodically from Census Bureau programs including the Company Organization Survey, Annual Survey of Manufactures, current surveys, and the economic censuses, and from the SSA and IRS programs. Specifically, classification codes for birth EI numbers are taken from administrative records using the SSA classification system and Census Bureau current surveys. Classification codes to new multiunit establishment adds are taken from the Company Organization Survey, Annual Survey of Manufactures, current surveys and SSEL classification card surveys. In addition, on a 5-year basis, classification codes for the majority of SSEL establishments are updated as part of the economic censuses. In the future, other potential sources for classification updates will include the statistical programs of the Bureau of Labor Statistics, the Department of Agriculture, and the Department of Health, Education, and Welfare.

## Geographic Codes

Physical location codes are updated annually for new or corrected establishments of multiunit companies as received on the Company Organization Survey. Corrections to individual records resulting from physical location changes received from user programs, including birth EI numbers received from IRS

and SSA, are also included with those from the Company Organization Survey.

Geographic codes are currently maintained to a county level minimum (although place and central business district codes are available for many establishments). If user programs require it and funds are made available, the SSEL system has the capability to maintain geographic codes at the place and tract level.

## Other Correction Types

Other types of corrections maintained by the SSEL include dates representing year of latest update, year of birth or death, legal form of organization codes, current survey indicator flags, and other flags or indicators as potential user requirements are made known.

## SSEL CORRECTION CRITERIA AND EDITS

### Correction Criteria

To insure that potential sources have maximum application for the SSEL, the SSEL staff proposes to implement standardized criteria for accepting input and changes to the individual items in the SSEL. Outlined below in the priority shown are the proposed acceptance criteria for each item to be updated in the SSEL.

1. **Size codes.** Reports covering reported data for the complete establishment operation.
2. **Industrial classification codes.** Reports covering the complete year including detailed classification data for the complete establishment operation; reports covering the complete year with sales/receipts data reported in percentages for the complete establishment operation; and additional acceptance criteria for classification codes based on less than the foregoing are listed in Working Paper 4.
3. **Organizational structure (including name/address changes).** Reports covering the enterprise and its affiliated establishments including subsidiary and company affiliation and reports covering establishment affiliations.
4. **Geographic codes.** Reports covering the physical location of establishments.

In addition to the above criteria, a major objective of the SSEL maintenance and update system is to make maximum use of results from user programs without further contact with the company so that duplicate efforts can be reduced. To help implement this concept, the SSEL staff proposes that user programs consider adding a few standard questions to their report forms for updating establishment affiliation, geographic



location, etc. The use of standardized questions will help to insure that maximum use can be made from user program results with minimum efforts, since data pertaining to standardized questions will be reported by respondents in the same fashion and, thereby, can be easily processed with existing SSEL procedures. The standardized questions have been described in earlier working papers and are summarized in appendix B. Significant changes to individual items from less than standardized criteria may warrant verification before inclusion into the SSEL. The time for verification of the conflict would vary depending upon the size of the establishment, the use of the establishment in a publication series, etc.

### SSEL Edits to Potential Input or Changes

All input or changes to SSEL files, whether as a first time entry or as a potential change to an existing item, must be systematically checked for completeness and adequacy. Editing of data includes the following:

**Dimensionality.** The dollar value data to be used in developing size codes for the SSEL will be converted to thousands of dollars for multiunit establishments and dollars for single units. Data will be edited for cents versus dollars and dollars versus thousands of dollars before converting to a size code. Inconsistent data are flagged for review and correction, if required.

**Economic Relationships.** To insure for consistent data among items for the same establishment, basic tests will be made such as sales/receipts versus payroll, payroll versus employment, etc. Inconsistent data (data outside of acceptable limits) are reviewed and corrected as required.

**Conflicting Information.** In any system involving multiagency updates, two agencies' input or changes may vary for the same establishment or EI number. The following solutions for each type of conflict are proposed:

- a. Company Organizational Structure Discrepancies—These cases will be resolved by contacting the agencies initiating the changes before updating or changing the structure of the enterprise.
- b. All Other (including SIC, size and geographic data)—For cases over a certain size (i.e., 100 or more employees), the discrepancy will be resolved by contacting the initiating agencies before inclusion into the SSEL files.

For all other cases, a ranking of program sources is proposed to resolve the conflict (e.g., information from the highest priority source would be accepted). A proposed ranking of programs would be as follows (as new sources are identified, the proposed rankings will be revised):

Multiunit establishments	Single-unit establishments
Economic census	Economic census
Agriculture census	Agriculture census
Annual Survey of Manufactures	Annual Survey of Manufactures
Current surveys <sup>1</sup>	Current surveys <sup>1</sup>
City and County Business Patterns	Classification card refile system
Annual Company Organization Survey	Social Security Administration
Internal Revenue Service	Internal Revenue Service

<sup>1</sup> Includes only those programs that cover the complete establishment operation.

Outlined below are some typical examples of conflicting information which may arise involving multiagency updates:

Two reports for the same establishment/company indicating different parent or subsidiary ownership.

Two reports for the same establishment/company with different size data (possible combined report).

Two reports for the same establishment with different SIC codes.

Two reports for the same establishment with different geographic codes (possible mailing address versus physical location problem).

In addition to the above minimum edits, the SSEL system has the capability of avoiding duplication of records because of the single identification number and single file references. For example, the SSEL has the capability to avoid duplicate establishment adds to the same company since before an establishment is added a check will be made for an existing establishment on the file with the same name, address, SIC code and ZIP code. If one exists, the add will not be made until resolution by SSEL staff. In addition, each record will also have a date control action which would initiate for particular establishments at a given date such file control actions as deletes, idle cases, bypass records, etc.

**Quality Control.** Periodically, the SSEL staff reviews a master sample of the file to insure completeness. The quality control procedures cover checking all incoming data for completeness including administrative records as well as reviewing present processing procedures. Any errors detected such as missing tapes, etc., are included in the next update unless the error type warrants rerunning the file.

### ANNUAL SCHEDULE OF SSEL UPDATE AND AVAILABILITY OF SSEL REVISIONS AND CHANGES TO USER PROGRAMS

#### Annual Update Schedule

Major Federal statistical agency processing and publication



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dates have been researched in an attempt to arrive at a meaningful update and availability schedule for anticipated user and supplier programs. The SSEL staff proposes to update the file quarterly. However, individual items may not warrant a quarterly update and therefore will be accumulated and incorporated into the file on a semiannual or annual basis (i.e., name/address changes, classification and geographic code changes, etc.).

The next year's organization survey will be imprinted in November of each year. Therefore, all changes from existing programs must be incorporated into the SSEL system by mid-September so that the most accurate information can be preprinted for respondent verification. Known affiliation changes will be clerically added to the survey forms if required.

The current system for updating the individual items in the SSEL is outlined below. See appendix C (p. 61) for the proposed update schedule for the SSEL.

**Company Organization Structure.** The enterprise structure is updated twice during the May-August period of each year from results of the Annual Organization Survey and user programs covering establishment affiliation. As report forms are received, all questions concerning company or establishment affiliation are screened and the necessary documents prepared indicating the affiliation changes.

Most organizational structure changes are processed during the May-August period of each year due to the Annual Organization Survey processing and processing of known annual user programs such as the ASM. Affiliation changes received by the SSEL outside of this period will be screened and processed, but held for the next update.

**Size-Code Data.** The economic data included in the SSEL (values for employment, payroll, etc.) are updated on an annual basis. Data for computing size codes are incorporated into the file from the Annual Organization Survey, current surveys and administrative records during mid-year processing (August of each year). Size codes are then computed for each organizational unit included in the SSEL. After the mid-year processing, corrections from user programs such as the ASM, City and County Business Patterns, etc., are held for inclusion with the next update.

To insure that significant changes in size patterns do not

go unrecognized, administrative record data is used as an edit against the existing size code on SSEL files. Large discrepancies such as 250 employees from administrative records versus a size code 50 (50-99 employees) on SSEL files are resolved before inclusion in **City and County Business Patterns**, and are flagged for inclusion in the upcoming Annual Organization Survey.

**Classification Codes.** Classification code corrections are accumulated and incorporated into the file for single units during the annual mid-year processing. Multiunit establishment classification corrections are updated during the May-August period of each year as part of the annual multiunit update.

**Birth Processing.** Approximately 70,000 new birth companies (or EI numbers) are received by the SSEL each month from the Social Security Administration. They represent applications to IRS for changes in legal organization or starting a new business. Birth companies are incorporated into the SSEL file quarterly. However, if user programs require a more frequent update, the SSEL system has the capability to process birth records more frequently, if funds are made available.

**Geographic Codes.** Physical location additions and changes are accumulated and incorporated into the file during the annual mid-year processing.

## Corrected Output

Preliminary plans for making the SSEL available to user agencies depend upon the needs and size of the user agency. Typical examples of satisfying user requests would include transmitting an updated master tape at periodic intervals with latest additions and changes to major statistical agencies making extensive and continuous use of the files and providing the capability to generate and tabulate data (universe or corrected data only) in SIC, geographic area, etc., by certain size-code ranges for research or publication by various user programs.

The SSEL has the capability to provide an updated correction tape on a quarterly basis. However, the availability of an updated master tape will be based solely on user needs and specifications.

TABLE 1. Codes Currently Available by Organization Level and Source

Organizational Level	Classification codes available	Size codes available <sup>1</sup>	Geographic codes available	Program source of input
Enterprise	1972 enterprise 3-digit categories	TE and payroll	Not applicable	1972 economic census, annual company organization surveys, SSA and IRS records
Legal entity for multiestablishment EI number	Various SIC levels	TE and payroll	Not applicable	1972 economic census, annual company organization surveys, SSA and IRS records
Establishments				
1. Multiunit establishments	1972 4-digit SIC	TE and payroll	County level minimum	1972 economic census; annual company organization surveys; 1973, 1974 and 1975 ASM; SSA and IRS records
2. Legal entity for single-unit establishments	1972 4-digit SIC and 1972 modified 4-digit SIC for SSA births	TE and payroll	County level minimum	1972 economic census, annual company organization surveys, 1973/1974 classification cards, SSA and IRS records

<sup>1</sup>The SSEL has the capability to derive size class codes representative of 1972 total values of sales/receipts for all 1972 economic census establishments. In addition, it is proposed that as soon as the appropriate data and funds can be obtained, the SSEL will incorporate size-class codes for all establishments representative of total values of sales/receipts. Administrative record data is used to estimate size codes for nonresponse companies from the company organization survey and nonmail companies each year.

TABLE 2. Current SSEL Update Sources

Sponsor and statistical program	Frequency of source and publication or report form/survey	Universe	Industries	Major items updated <sup>1</sup>
CENSUS BUREAU				
Economic censuses	Every 5 years	2.5 million establishments	Transportation, construction, mining, manufacturing, wholesale, retail, and selected services	Company structure, TE, PR, sales/receipts, SIC, geographic codes, etc.
Annual Survey of Manufactures (ASM)	Annual	70,000 establishments	Manufacturing	Company structure, TE, PR, SIC, shipments, geographic codes, etc.
Company Organization Survey (COS)	Annual (survey only)	150,000 companies, representing one million establishments	All industries, except private households and religious organizations	Company structure, TE, PR, SIC, and geographic codes
City and County Business Patterns (CCBP) <sup>2</sup>	Annual (publication only)	275,000 multiunit EI numbers (representing one million establishments) and 4.0 million single-unit EI numbers	All industries, except private households, railroads, and government	TE, PR, SIC, and geographic codes

See footnotes at end of table.

TABLE 2. Current SSEL Update Sources (Continued)

Sponsor and statistical program	Frequency of source and publication or report form/survey	Universe	Industries	Major items updated <sup>1</sup>
Census of Agriculture	Every 5 years	2.7 million establishments	Agriculture and agriculture services	Company structure, value of production, SIC, and geographic codes
Current Business Surveys	Monthly, quarterly, and annually	60,000 companies representing 200,000 establishments plus 50,000 births	Wholesale, retail, and selected services	Company structure, SIC, and geographic codes
Current Industrial Reports	Monthly, quarterly, and annually	40,000 establishments	Manufacturing	Company structure and SIC codes
SSEL classification card surveys (refile system)	Annual	1973 and 1974 mail-outs included approximately 150,000 single-unit EI numbers	All industries	Company structure, SIC, and geographic codes
SOCIAL SECURITY ADMINISTRATION				
EI number birth file (SS-4)	Monthly	Approximately 70,000 birth EI numbers monthly	All industries	Source for new EI numbers, including SIC and geographic codes
Employers quarterly FICA taxes (941A or DECQ file)	Quarterly thru 1977	4 million EI numbers	All industries	Four-quarter edited FICA payroll file, Mar. 12 employment and wage items
EI number correction file (EIC file)	Quarterly	60,000 EI numbers	All industries	SIC and geographic code corrections, plus EI number reactivations
SSA establishment reporting plan (SSA form 5019)	Flow basis	20,000 companies	All industries	Company structure and SIC codes
INTERNAL REVENUE SERVICE				
Business master file (BMF)	Annual	11 million EI numbers	All industries	Name, address, filing requirement codes, etc.
Business master (BMF) change file	Monthly	100,000 EI numbers	All industries	Name, address, filing requirement codes, etc.
IRS quarterly payroll file (941, 941E, 941SS, and 941PR)	Quarterly	4 million EI numbers	All industries	Four-quarter total compensation and FICA payroll files beginning in 1978, March 12 TE
990 series, 1040C, 1040F, 1065, and 1120 series income tax forms	Every 5 years	6 million EI numbers	Mining, construction, manufacturing, wholesale, retail, selected services, nonprofits, and agriculture	Sales/receipts data, production data, etc.
IRS 943 payroll file	Every 5 years	300,000 EI numbers	Agriculture	Annual payroll
IRS principal industrial activity (PIA) coding file	Annually	4 million EI numbers	All industries	PIA code

<sup>1</sup> See app. A (p. 59) for individual items updated by each program including level of detail obtained. Additional items can be added to the file as additional user requirements are made known.

<sup>2</sup> The initial CCBP (formerly County Business Patterns) will include all employer cases in all economic industries except agriculture, private households, railroads, and governments. The publication will include March 12 employment, first-quarter payroll and annual payroll by 4-digit SIC, in addition to State and county data.



## Items To Be Updated by User and Supplier Programs

(Additional items can be added as major user needs are made known )

Program sources	Company structure		Size data				SIC coding assigned			Other changes						
	Company	El and/or reporting unit	Establishment	Employment	Payroll	Sales/receipts or production	Inventories	Fifth indicator	2- and 3-digit	3- and 4-digit	4-digit minimum	Name and address	Physical location	LFO code	Current survey status	Births and deaths
Economic census	X	X	X	X	X	X	X	( )			X	X	X	X	X	X
Annual Survey of Manufactures	X	X	X	X	X	X	X	( )			X	X	X	X	X	X
Company Organization Survey	X	X	X	X	X	( <sup>2</sup> )					X	X	X	X	X	X
City and County Business Patterns (CCBP)		X	X	X	X	( <sup>2</sup> )					X	X	X	X	X	X
Census of agriculture	X	X	X	X	X	X					X	X	X	X	X	X
Current surveys		X	X	X	X	X					X	X	X	X	X	X
Internal Revenue Service		X	X	X	X	X	X	X				X	X	X	X	X
Social Security Administration		X	3	X	X	X			X	X		X	X	X	X	X
SSEL classification card surveys		X	3	X	X	X					X	X	X	X	X	X

<sup>1</sup> Fifth economic indicator will be limited to those data items which are available from administrative records such as total assets.<sup>2</sup> As soon as the appropriate data can be obtained, the SSEL will incorporate size-class codes representative of total and secondary values of sales/receipts<sup>3</sup> Single-unit establishments only.



## Annual SSEL Update Schedule for Programs, by Type of Change

Period of update	Annual Company Organization Survey <sup>1</sup>		Annual Survey of Manufactures		Social Security Administration				Internal Revenue Service			Classification card refile system		Current surveys		CCBP
					DECQ file	SS-4 births	EIC	941	990, 1040C, 1065, and 1120 tax forms	Business master file	BMF change file					
	Affiliation	Size codes	Geographic codes	SIC codes	Size codes	EI numbers	Geographic codes	Geographic codes	Size codes	Size codes	SIC codes (PIA)	SIC codes	SIC codes	Affiliation	Size codes	
Dec. 1976	Mailout				X	X	X	X	X	X		X		X	X	
Jan. 1977			Mailout													
Feb. 1977					X	X	X	X	X	X		X				
Mar. 1977																
Apr. 1977																
May 1977																
June 1977	X	X	X	X	X	X	X	X	X	X				X	X	Publish
July 1977																
Aug. 1977																
Sep. 1977	X	X	X	X	X	X	X	X	X	X	( <sup>2</sup> )	X	X	X	X	Correct
Oct. 1977																
Nov. 1977					X	X	X	X	X	X						
Dec. 1977					X	X	X	X	X	X		X		X	X	

NOTE: The programs listed are the initial ones for updating the SSEL and the anticipated months that additions and changes from each program will be incorporated into the SSEL file. Other programs will be added as additional users are identified and incorporated into the SSEL system. For reference purposes, the dates shown cover publishable year 1975.

<sup>1</sup>During quinquennial census years, the Company Organization Survey will be conducted only for nonmail multiunit companies.

<sup>2</sup>Will be available in 1978 for the economic censuses.





## Scope and Content of the City and County Business Patterns Program

### INTRODUCTION

An integral byproduct of the Standard Statistical Establishment List (SSEL) will be **City and County Business Patterns**, an annual publication which will present the statistical information compiled yearly as a result of SSEL operations. The CCBP publication represents an expansion and revision of its predecessor, **County Business Patterns**, which has been published annually since 1964. Data under the new format is first available for 1974.

This paper, seventh in a series of working papers covering the design, operation, and related aspects of the SSEL, will describe the nature and objectives of **City and County Business Patterns**, the connection of the program to the SSEL and the advantages the new program offers as compared to its predecessor, **County Business Patterns**.

The implementation of the SSEL is a major step toward increasing the comparability and uniformity of statistical series conducted by the various members of the Federal statistical system. The CCBP program will provide user agencies with the statistical wherewithal to use the SSEL as a representative universe list and sampling frame. Because accurate sampling requires the SSEL user to know precisely the characteristics of the universe, whether it involves millions of establishments or a regional segment, the necessity of the CCBP as a statistical description of the universe is recognized. Without the detail information contained in the CCBP publication, the concept of a multiuser-oriented SSEL would be limited. CCBP will also provide the needed framework and benchmark control totals for improving a number of other data series conducted by the Bureau.

As well as serving as a facilitative statistical link to the SSEL, the CCBP publication will continue to provide the business community and other users with the economic data previously available in **County Business Patterns**. The new **City and County Business Patterns** will significantly reduce the limitations that were inherent in CBP data.

Since CCBP contains detailed information on the business and industrial makeup of each of the Nation's more than 3,000 counties, its usefulness is wide-ranging. Some of the functions realized by CCBP users include analyzing market potential, measuring the effectiveness of sales and advertising programs, setting sales quotas and budgets, analyzing the industrial structure of regions and making basic economic studies of small areas. Also, the small area statistics needed to determine employment concentrations and trends by 4-digit industry are

used by Federal, State and local governments in planning for and administering various programs.

The use of **City and County Business Patterns** as a statistical description of the universe list is necessary because individual establishment records in the SSEL will include size class codes for employment and payroll (and, when the funds are available, for sales/receipts and, possibly, other data items such as inventories). The use of size-class codes to represent establishment information in the SSEL is necessary because the confidentiality restrictions of Title 13, under which the Bureau obtains information, provide that actual data for individual establishments may not be disclosed. Working paper 3 describes more specifically the classification of economic characteristics in the SSEL. To determine particular data cells to be studied, sampling ratios to be used, weights to be assigned, etc., the user will reference the data aggregates shown in the CCBP publication. The data contained therein provides the user with the resources to make an accurate study of total or very select universes and arrive at an optimum design sample.

After determining the sampling scheme that will best represent the universe to be studied, the user can access the SSEL and construct a sample panel using the various representative codes (size class, SIC, geographic, etc.) that describe its contents.

### COUNTY BUSINESS PATTERNS PRIOR TO 1974

The CBP program from 1964-1973 (prior to 1964 CBP was published at irregular intervals) was a joint effort of the Social Security Administration and the Bureau of the Census to provide annual economic statistics that the business community and government used in a wide variety of ways, as noted earlier.

Statistics were provided on number of reporting units, first quarter payroll taxable under the Federal Insurance Contributions Act (FICA) and employment by county location and industry classification (based on 1967 Standard Industrial Classification<sup>1</sup> designations). The data were derived primarily from SSA employment and taxable payroll information reported on Treasury Form 941, Schedule A. Supplemental information, not reported on the 941 "A" form, was obtained for a number of multiunit companies in a special survey conducted jointly by the Census Bureau and SSA.

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<sup>1</sup>Standard Industrial Classification Manual: 1967, Executive Office of the President, Office of Management and Budget.

Due to the Social Security Administration's method of collecting data (Establishment Reporting Plan), the statistics in *County Business Patterns* were tabulated in terms of "reporting units." The Establishment Reporting Plan (ERP) applies a standard system to the reporting procedures of multiestablishment employers so that the needed statistical information can be obtained with a minimum reporting burden on these employers. Under the ERP system, employment and payroll data may be aggregated for all nonmanufacturing establishments with the same employer identification (EI) number (the number assigned by IRS for tax reporting purposes), if the establishments are located in the same county and engaged in the same business activity. The data are reported for the establishment group as a whole, called a reporting unit. Thus, detailed data for each physical location of a business were not always available. All manufacturing establishments were requested to report data separately even if two or more are in the same industry and in the same county.

### Types of Data Collected

As noted, the 1964-1973 CBP program reflected data on mid-March pay period employment and first-quarter FICA taxable payroll.

Employment data in the publication series comprised the following types of FICA coverage: (a) All covered wage and salary employment of private nonfarm employers and of nonprofit membership organizations under compulsory coverage and (b) all employment of religious, charitable, educational, and other nonprofit organizations covered under the elective provisions of the Federal Insurance Contributions Act (FICA).

The following types of employment, whether covered in whole or in part by the social security program, were excluded from CBP tabulations: Government, self-employed, farm, domestic service reported separately, railroad employment subject to the Railroad Retirement Act, and employment on oceanborne vessels.

Mid-March pay period employment is the count of employees during the pay period that includes March 12 of the subject year, as reported on the quarterly Treasury Form 941, Schedule A.

First-quarter FICA taxable payrolls are defined as the amount of taxable wages paid for covered employment during the January-March quarter. Wages in excess of the taxable limit or of non-FICA covered employees are not reflected in CBP data. The specific limit on the amount of wages that are subject to the FICA withholding tax is raised at times.

In order to publish data on a detailed geographic basis, reporting units were assigned county geographic codes on the basis of the physical location of establishments represented by the reporting units. Reporting units without a fixed location within a State or of unknown county locations were tabulated separately under a statewide classification for each State.

Social Security Administration procedures provide that whenever an individual employer has fewer than 50 employees,

his entire business shall be regarded as a single reporting unit regardless of the county and industry distribution of the operation. However, the data in CBP for such employers were distributed by county and industry based on individual establishment records available from the economic censuses.

CBP provided summary totals for all standard metropolitan statistical areas (SMSA's) and for metropolitan State economic areas (MSEA's) in New England.

The disclosure provisions of the Bureau (in accordance with Federal regulations) specify that data may not be released if the operations of an individual employer are disclosed. The number of reporting units and their distribution by employment size classes are not considered disclosures and these items may appear in instances where employment and payroll data are withheld. Data were not shown separately for any industry at the 2-, 3-, or 4-digit SIC level that did not have at least 100 employees or 10 reporting units in the area (county, State, or United States) covered by the tabulation. Data for an unpublished industry were included in the total shown for the broader industry group of which it was a part.

The 1973 *County Business Patterns* was the final edition under the concepts of the old series. The new publication will continue to be titled *County Business Patterns* until place (city) data are included (tentatively scheduled for 1978), at which time the title formally will become *City and County Business Patterns*.

## THE 1974 AND FUTURE CITY AND COUNTY BUSINESS PATTERNS

### SSEL as Data Base

The introduction of the Standard Statistical Establishment List system provides the basis for an expansion of the CBP program, i.e., *City and County Business Patterns*. The annual operations of the SSEL will substantially increase the utility of the publication.

The development of the SSEL constitutes a major step toward modernizing and standardizing the means by which various statistical programs of the government collect and process information. The SSEL consists of a central, multi-purpose, computerized name and address file of all domestic establishments in the economic area with paid employees. Employer establishments in Puerto Rico, Guam, American Samoa, and the Virgin Islands are also included. Each name and address record on the file contains a standardized set of data and information items, plus the capacity for custom or special purpose codes. More detailed descriptions of the nature of SSEL operations and the use of codes for economic size, SIC and geographic location are available in previous SSEL working papers.

Given the necessary changes to Title 13 legislation, the use of one centrally maintained and updated employer universe list will help in diminishing the problems of comparability and consistency that now exist in data series conducted by



various Government agencies. The capabilities of the system include survey selection from a common universe, a reduced need for individually maintained agency or program mailing lists with unrelated numbering systems, tabulating benchmark data totals for research or publication by various user programs, etc.

The SSEL universe file was initially constructed using the 1972 economic census records and administrative records of the Internal Revenue Service and Social Security Administration. Firms not within the scope of the economic census were identified from administrative records (large ones were contacted in a separate survey as potential multiunits) and are included in the SSEL.

The structure of the SSEL is such that the universe of firms is identified in as comprehensive and detailed a manner as possible. All segments of a firm's operations are fully represented, in that (for multiestablishment firms) individual records are maintained for the enterprise (parent company), legal entity (a group of individual establishments with the same EI number), and establishment (single physical location) level of company organization. A common numbering system links together and identifies the affiliation of parent company, subsidiaries, EI numbers, and establishments. If necessary, special combinations of establishments or subsidiaries can also be uniquely identified. For single-establishment firms, of course, the designations of parent, legal entity, and establishment are synonymous. Working paper 2 contains the specifics of organizational structure.

Data (mid-March pay period employment, total first-quarter payroll and total annual payroll) for the establishments of multiunit employers are collected on the SSEL annual Company Organization Survey (COS). Additionally, some single-unit firms are contacted periodically for an up-to-date SIC and to check on the latest company affiliation. The data for all other single-unit firms are obtained from administrative records of IRS and SSA.

Thus, the CCBP program is provided with detailed economic data on an annual basis, made possible through the regular and constant SSEL operations of identifying and maintaining an up-to-date business universe. The annual updating of economic size data, SIC codes, geographic locations, and organizational structure ensures that the SSEL will serve as an accurate, current base for the compilation of statistical aggregates. Working Paper 6, SSEL Maintenance and Update System, contains a detailed description of update methodologies.

An ongoing part of SSEL processing is the systematic evaluation of data prior to its acceptance, whether reported on the Company Organization Survey or obtained from administrative records. Editing methods are used to check the magnitude and year-to-year comparability of incoming data and to correct for blank or missing data items where necessary. This is done for both establishment data from the COS and legal entity, or EI level, data from administrative records. When the data are later tabulated in the CCBP for specific

data cells (e.g., SIC by county), a prepublication analysis, consisting of present to previous year evaluations of the summary cell totals, is performed. Data changes of a significant size are reviewed for validity in order to identify and resolve discrepancies prior to publishing cell totals. Corrections made to establishment records during the CCBP review process are routinely carried back to the SSEL universe file to ensure a current, accurate data base.

### **The CCBP Publication: New Concepts**

Starting with the 1974 publication, CCBP provides summary data on the number of employees for the mid-March pay period, first-quarter total payroll, total annual payroll, number of establishments and the number of establishments by employment size class. Data are tabulated by detailed kinds of businesses based on the 1972 revised standard industrial classification designations.

The introduction of the SSEL system and its annual Company Organization Survey permits data collection and publication to be on an establishment basis, as opposed to the reporting unit concept used in the previous CBP program.

The establishment (a single physical location at which business is conducted) is generally considered to be the smallest basic unit for which key figures of economic activity are available. The use of the establishment concept provides for a more detailed and definitive level of data reporting and publication not possible under the former reporting unit basis. Users of the data will know the exact components of a particular universe or the data cells that comprise it. Additionally, the use of the establishment as the basic unit of economic activity will allow consistency with other major data series currently conducted by the Bureau of the Census.

SSEL data collection also facilitates the publishing of data on total quarterly and annual payroll, thus overcoming one of the inherent drawbacks of the previous program which was limited to first-quarter FICA taxable payroll.

As stated earlier, FICA taxable payrolls are the amount of taxable wages paid for covered employment during the January-March quarter, with a specific limit imposed on the amount of payroll subject to the tax. Collecting data for total payroll (both quarterly and annual), in addition to removing the limit on dollar figures reported, will permit the collection of data for those economic activities not under FICA coverage such as parts of the nonprofit sector. Also, the inclusion of total quarterly and annual payroll provides a needed measure of continuity with other data series (e.g., IRS Statistics of Income). The collection of total annual payroll also aids in the identification of those seasonal operations not having payroll values for the first quarter, an advantage not realized in the pre-1974 CBP program.

Geographic detail published in the City and County Business Patterns is of basically the same format as in the old program, i.e., data are shown for each county, individual States, and the total United States. Data for standard metropolitan statistical areas will not be included in the initial publications. SMSA

data are scheduled to be published in a separate report starting with 1976 data. Although establishment records in the SSEL have geographic codes to the place (city) level, current plans do not include expanding the publication to show place data until 1978, when funding of the program permits. (At that time, plans are to present data for places for 100,000 or more population.) Coverage of Puerto Rico, Virgin Islands, and Guam will be resumed in the 1978 publication.

Occasionally, changes in the area definitions of geographic boundaries occur, requiring an adjustment to establishment geographic codes and thus to the makeup of a particular data cell. When such changes occur, affected data cells will be footnoted accordingly, in order to alert the user to the reason for what ostensibly would be a discrepancy in data comparability.

As noted, the advent of the SSEL and the annual Company Organization Survey has permitted an increase in the economic information contained in CCBP. Data will be shown for most of the economic divisions of the economy, i.e., agricultural services, mining, construction, manufacturing, transportation, public utilities, wholesale and retail trade, finance, insurance, real estate, and services. Data will be tabulated for approximately 750 detailed kinds of businesses.

The policy of the SSEL is to exclude nonemployer firms, i.e., small businesses with no annual payroll that are usually operated by sole proprietors or working partners, as a formal component of the universe list. Hence, small firms with no paid employees will not be subject to annual updating and maintenance procedures for the CCBP program. Although numerous, nonemployers account for a relatively insignificant portion of economic activity; coverage, therefore, will be updated only once every 5 years as part of the economic censuses.

In the future, the CCBP program proposes to identify (via the SSEL) and publish a greater number of 4-digit levels where the classification and associated data can be obtained on a regular basis. In the past this has been precluded because administrative record birth coding received by the Census Bureau is at less than a 4-digit level in some cases.

It is also planned that the present CCBP data on payroll, employment and number of establishments be supplemented

by broadening the SSEL data base to include establishment-level sales and receipts. With this addition, **City and County Business Patterns** would become, in effect, an annual benchmark between economic census years. The utility of the publication would be extended not only for private users, but would aid in the construction of the national accounts and in estimating personal consumption expenditures. Also, the proposed data would strengthen existing Bureau programs by providing a basis for comparison of results. An expansion of coverage to include data for the government sector is also planned. The specific timing of these additions is dependent on the availability of funding.

### Comparability

**City and County Business Patterns**, in addition to providing data for a particular reference year, also contains data for the preceding year. Accordingly, the 1974 publication contains prior year data for 1973 under the new concepts (establishments, total payroll, 1972 SIC basis, etc.) and, when used in conjunction with the 1973 CBP publication (reporting units, FICA-covered payroll, 1967 SIC basis, etc.), serves as a link, or bridge, between the old and new series.

### Timing of Publication

The **City and County Business Patterns** will be released on a flow basis, by State, beginning approximately 12 months after the reference year. Although this represents about a 6-month delay as compared to the former **County Business Patterns**, the data provided is for a full year of business operations as compared to first quarter only in the previous program.

As with **County Business Patterns**, public use tapes will be available for purchase and will include information for smaller cells not in the printed publications. The degree of information shown will be dependent upon the existing SSEL disclosure provisions. Where employment data cell totals have to be suppressed because of confidentiality, size ranges will be substituted. Potential CCBP tape purchasers have been informed of the revised program in a letter delineating the new concepts.



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